



East Yosemite Valley Utilities Improvement Plan

Finding of No Significant Impact,
Errata Sheets Part 1: Errors and Clarifications,
Errata Sheets Part 2: Summary of Substantive Public Comments & Responses,
Summary of Public Comments and Responses,
Merced Wild and Scenic River Section 7 Determination,
Wetland Statement of Findings, and

November 2003

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East Yosemite Valley Utilities Improvement Plan
Environmental Assessment

Yosemite National Park

Finding of No Significant Impact

PURPOSE AND NEED

This Finding of No Significant Impact (FONSI) documents the decision of the National Park Service to adopt a plan for the improvement of utility infrastructure in east Yosemite Valley and the determination that no significant impacts on the human environment are associated with that decision. The National Park Service plans to develop new consolidated utility corridors in the east Valley, reduce utility infrastructure within the Merced River and other environmentally sensitive areas identified for ecological restoration in the *Yosemite Valley Plan*, and provide efficient and environmentally sound utility service to areas proposed for development or redevelopment under the *Yosemite Valley Plan*. The plan proposes utility improvements to develop a utility system that maximizes the efficiency of utility operations and maintenance and minimizes the potential for future environmental impacts.

In order to implement many of the actions called for in the *Yosemite Valley Plan*, existing utility facilities in the east Valley must be upgraded, relocated and/or removed, or abandoned in place. Currently, east Valley utilities exist primarily in underground corridors that are dispersed throughout the east Valley, including in environmentally sensitive areas such as the riverbed, wetlands, meadows, and cultural resource sites. Development of a utilities improvement plan is needed to provide long-term guidance to utility infrastructure relocation and improvement. This will ensure that the utility system developed maximizes the efficiency of utility operations and minimizes adverse impacts on the park's natural and cultural resources. Where possible, various utilities will be consolidated into integrated corridors to ensure adequate service to existing and proposed facilities. The integration of utilities into fewer corridors will reduce existing operation and maintenance impacts on park natural resources. This will be achieved by removing some utility infrastructure in the riverbed and floodplain and relocating utilities out of environmentally sensitive areas, thus facilitating the proposed ecological restoration of those areas identified in the *Yosemite Valley Plan*. The goals of the project are to:

- ensure adequate service to east Valley facilities relocated or developed under the *Yosemite Valley Plan*,
- implement upgrades needed to address previously identified utility condition and capacity issues,
- maximize use of existing transportation and utility corridors and proposed new transportation corridors for placement of consolidated utility corridors,
- minimize potential future impacts to environmentally sensitive areas, and
- protect and preserve the Merced Wild and Scenic River as called for in the *Merced Wild and Scenic River Comprehensive Plan* (Merced River Plan).

The East Yosemite Valley Utilities Improvement Plan was developed to achieve these goals. A complete description of the plan and its environmental consequences are contained in the *East Yosemite Valley Utilities Improvement Plan Environmental Assessment*.

SELECTED ALTERNATIVE AND ALTERNATIVES CONSIDERED OR ANALYZED

The *East Yosemite Valley Utilities Improvement Plan Environmental Assessment* analyzed three alternatives, Alternative 1: No Action; Alternative 2: Implement East Yosemite Valley Utilities Improvement Plan with a Merced River Crossing near Housekeeping Camp; and Alternative 3: Implement East Yosemite Valley Utilities Improvement Plan with a Merced River Crossing near Sentinel Bridge. These alternatives were developed by the National Park Service based on the project purpose and need, issues raised during scoping, and other public comment. The *East Yosemite Valley Utilities Improvement Plan Environmental Assessment* disclosed the potential environmental consequences that may result from implementation of each alternative. Comments received during the public review of the *East Yosemite Valley Utilities Improvement Plan Environmental Assessment* were considered throughout the decision making process.

Alternative 1: No Action Alternative. The No Action Alternative would continue the existing management and operation of the utility systems currently operating within the east Valley. Maintenance of utility infrastructure is an ongoing park administrative responsibility, and this alternative would result in the continuation of routine operations, including repairs and maintenance of the various utility facilities as needed. This alternative specifically includes conducting emergency, immediate, and intermediate repairs required to comply with the California Regional Water Quality Control Board Cleanup and Abatement Order. This Order requires the National Park Service to address capacity and condition problems with the existing wastewater collection system in Yosemite Valley to resolve public health, safety, and environmental concerns related to recent utility failures.

Under the No Action Alternative, there would not be a consolidation of utility corridors in Yosemite Valley. The current dispersed utility corridors for water, wastewater, electric, and communications lines throughout the east Valley would remain in place. Utility corridors in the meadow areas identified for ecological restoration in the *Yosemite Valley Plan* would not be removed or abandoned. This could limit the range of options for ecological restoration and result in continued environmental degradation in these areas as utilities are repaired and maintained in the future.

The No Action Alternative would not provide service to the redeveloped or proposed new facilities identified in the *Yosemite Valley Plan*. This would adversely affect the National Park Service goal of providing opportunities for high-quality, resource-based visitor experiences and limit the park's ability to implement many of the actions called for in the *Yosemite Valley Plan*.

Selected Alternative: Implement East Yosemite Valley Utilities Improvement Plan with a Merced River Crossing near Housekeeping Camp. The Selected Alternative identifies an East Yosemite Valley Utilities Improvement Plan with a new Merced River utility corridor crossing located near Housekeeping Camp. This alternative calls for the designation of new consolidated utility corridors, construction of new utility infrastructure to effectively serve existing and proposed facilities, removal of utility corridors in areas identified for ecological restoration in the *Yosemite Valley Plan*, and reduction of utility corridor crossings in the Merced River from 13 individual crossings to three consolidated crossings. This alternative also includes the wastewater system repairs required to comply with the California Regional Water Quality Control Board order, which were discussed under the No Action Alternative. The Selected Alternative does include Route Option A, as described in the environmental assessment for the Camp6/Cook's

Meadow area. The actions proposed under the Selected Alternative would ensure that the National Park Service's investment in infrastructure provides for efficient utility services that protect park resources over the long term.

Alternative 3: Implement East Yosemite Valley Utilities Improvement Plan with a Merced River Crossing near Sentinel Bridge: Alternative 3 identified an East Yosemite Valley Utilities Improvement Plan with a new Merced River utility corridor crossing located near Sentinel Bridge. This alternative calls for the designation of new consolidated utility corridors, construction of new utility infrastructure to effectively serve existing and proposed facilities, and removal of utility corridors in areas identified for ecological restoration in the *Yosemite Valley Plan*. This alternative also includes the wastewater system repairs required to comply with the California Regional Water Quality Control Board order, which were discussed under the No Action Alternative. The actions proposed under Alternative 3 would ensure that the National Park Service's investment in infrastructure provides for efficient utility services that protect park resources over the long term.

Alternatives Considered But Dismissed. The National Park Service considered six additional alternatives to the three alternatives evaluated in the environmental assessment. These six alternatives were dismissed from further consideration because they did not meet the project's purpose and need or they were not consistent with the guidance and direction provided in the Merced River Plan and/or the *Yosemite Valley Plan*. These included:

Expand Existing Utility Infrastructure to New Development Areas. This alternative included keeping all existing utility infrastructure in place and constructing further expansions to the existing utility system to provide service to new or redeveloped areas proposed in the *Yosemite Valley Plan*. This would increase the number of utility lines dispersed throughout the Valley rather than consolidating utility lines into utility corridors. This alternative does not meet the goals of the *Yosemite Valley Plan* to minimize impacts to highly sensitive resources and allow restoration of environmentally sensitive areas. This alternative would cause unacceptable environmental and social impacts by increasing the number of utility corridors through environmentally and culturally sensitive areas. Park operations would also be adversely affected by the increased number of utility corridors to be maintained and operated as well as the costs associated with maintaining the many river and creek crossings.

East Yosemite Valley Utilities Improvement Plan with Superintendent's Bridge Crossing. This alternative included implementation of the East Yosemite Valley Utilities Improvement Plan with the Merced River crossing located near Superintendent's Bridge. This alternative would have resulted in a need to maintain the Yosemite Creek wastewater line crossing at the Yosemite Creek Lift Station. The existing wastewater line crossing at the Yosemite Creek Lift Station is currently being exposed in the creekbed of Yosemite Creek, limiting the ability to expand the crossing to accommodate water and wastewater lines and to lower the crossing to reduce impacts to the Merced River. The existing utility line crossing is already at the minimum acceptable elevation to be tied into the Yosemite Creek Lift Station. The increased engineering requirements, unacceptable environmental effects, and cost of this effort make this alternative technically and environmentally unreasonable to carry forward for further analysis.

Elevated River Crossing at Sentinel Bridge. This alternative included an elevated crossing of the Merced River at Sentinel Bridge by a consolidated utility corridor. It was determined that the arched stone design of the Sentinel Bridge does not allow for a means to incorporate the proposed utility lines onto the bridge. In addition to the engineering feasibility issues, drawbacks to this alternative included floodplain impacts, impacts to scenic resources from utility infrastructure visible on the underside of the bridge, and adverse operational impacts. This bridge has been subjected to damage from woody debris passing under the bridge during past flood events, as evidenced by scrape marks on the underside of the bridge. Due to the high water level experienced in this area during flooding, a utility line crossing under the Sentinel Bridge would

likely be damaged in future flood events, resulting in utility outages and possible uncontrolled releases of sewage into the Merced River. This would be inconsistent with National Park Service floodplain policy that calls for projects to reduce the risk of flood loss and minimize the impacts of flooding on human health and safety. Constructing the utilities under Sentinel Bridge would also create inefficiencies for utilities operations and maintenance due to the arched design of the bridge.

Tecoya Residences Alternative Alignment. This alternative was dismissed from further consideration since there were other corridor alternatives available to meet the needs of this area with lesser environmental effects; therefore, this alternative was not consistent with the guidance of the Merced River Plan and the *Yosemite Valley Plan*.

Tenaya Creek Alternative Alignment. This alternative was dismissed from further consideration since there were other corridor alternatives available to meet the needs of this area with lesser environmental effects; therefore, this alternative was not consistent with the guidance of the Merced River Plan and the *Yosemite Valley Plan*.

Residence One Alternative Alignment. This alternative was dismissed from further consideration since there were other corridor alternatives available to meet the needs in this area with lesser environmental effects; therefore, this alternative was not consistent with the guidance of the Merced River Plan and the *Yosemite Valley Plan*.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

The environmentally preferred alternative is determined by applying criteria identified in Section 101 of the National Environmental Policy Act (NEPA) to each alternative considered. In accordance with NEPA, the environmentally preferred alternative would best: (1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations; (2) assure for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings; (3) attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences; (4) preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice; (5) achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and (6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

The National Park Service has considered the alternatives in this analysis in accordance with NEPA and Council on Environmental Quality regulations (Section 1505.2) and has determined that the Selected Alternative, Alternative 2 as presented in the *East Yosemite Valley Utilities Improvement Plan Environmental Assessment*, is environmentally preferable based on its furtherance of the following National Environmental Policy Act goals as evaluated below.

- **NEPA Section 101 Requirement 1.** “Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.”

The Selected Alternative will best fulfill the responsibilities of each generation as trustee of the environment for succeeding generations by implementing consolidated utility corridors that provide safe and efficient utility service to Valley facilities, while minimizing environmental impacts. The Selected Alternative reduces the existing concentration of utility infrastructure in river and creekbeds, floodplains, and other environmentally sensitive areas. This reduction in utility infrastructure would enhance the benefits expected from other projects planned to restore ecological systems in the Valley. It also provides efficient and environmentally sensitive utility service to development areas identified in the *Yosemite Valley Plan*. Alternative 1 would not fulfill

the responsibilities because it would retain the existing concentration of utilities in the creek and riverbeds, floodplain, and other environmentally sensitive areas. This would result in ongoing adverse impacts to these areas associated with future utility maintenance and repair activities, and would limit the benefits from proposed ecological restoration projects that were identified in the *Yosemite Valley Plan*. Alternative 1 would not provide efficient and environmentally sensitive utility service to development areas identified in the *Yosemite Valley Plan*. Alternative 3 is similar to the Selected Alternative but would result in a longer utility corridor route that would affect more cultural resources than the Selected Alternative.

- **NEPA Section 101 Requirement 2.** “Assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings.”

The Selected Alternative reduces utility infrastructure in environmentally sensitive areas, thereby allowing for proposed restoration of these areas as identified in the *Yosemite Valley Plan*. The Selected Alternative has been designed to minimize adverse effects on scenic and natural resources during construction. The Selected Alternative is expected to reduce the potential for future utility-related impacts on highly valued resources in Yosemite Valley by locating utility facilities in less environmentally sensitive areas, which would result in lower future adverse effects from utility maintenance and repair. Alternative 1 would maintain the existing concentration of utility infrastructure in environmentally sensitive areas, with high potential for adverse future effects on the surroundings. Alternative 3 is similar to the Selected Alternative but would result in a longer utility corridor route that would affect more cultural resources.

- **NEPA Section 101 Requirement 3.** “Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.”

The Selected Alternative would attain the widest range of beneficial uses of the environment by reducing utility infrastructure in environmentally sensitive areas, such as river- and creekbeds, floodplains, and wet meadows. The reduced number of river and creek crossings would reduce risks to health and safety from utility failures in these areas. The proposed new utility corridors are sited to reduce undesirable and unintended consequences, namely, continued maintenance and repairs of utility facilities in environmentally sensitive areas. Alternative 1 would result in continued degradation of the environment and risk to health and safety due to the concentration of utility infrastructure in environmentally sensitive areas. Alternative 3 is similar to the Selected Alternative but would result in a longer utility corridor route that would affect more cultural resources.

- **NEPA Section 101 Requirement 4.** “Preserve important historic, cultural, and natural aspects of our national heritage and maintaining, wherever possible, an environment that supports diversity and variety of individual choice.”

The Selected Alternative is designed to consolidate utility infrastructure into corridors that would minimize impacts to environmentally sensitive areas. The reduction of total utility infrastructure in the Valley is expected to reduce the potential for future adverse effects to natural and cultural landscape resources. Construction of proposed utility corridors would disturb many archeological resources, although use of existing disturbed areas would minimize impacts to other cultural resources. In addition, the National Park Service will comply with the terms of the Programmatic Agreement to mitigate impacts to the archeological resources. Alternative 1 would retain the existing widely dispersed utility systems, resulting in higher potential adverse effects on natural and cultural landscape resources from utility maintenance and repairs in the future. Alternative 3 is similar to the Selected Alternative but would result in a longer utility corridor route that would affect more cultural resources, particularly in the area near Sentinel Bridge. Alternative 3 has the potential to affect 25 known archeological sites, as opposed to the 22 known sites potentially affected by the Selected Alternative. Alternative 3 also has the potential to affect

an additional historic Native American habitation site and additional cultural landscape resources when compared to the Selected Alternative.

- **NEPA Section 101 Requirement 5.** “Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life’s amenities.”

The Selected Alternative is designed to ensure safe and efficient utility services to developed areas in Yosemite Valley, while reducing the potential for future impacts to environmentally sensitive areas. This would achieve a balance between population and resource use, and permit high standards of living and a wide sharing of life’s amenities. Alternative 1 would result in more potential for future adverse effects to park resources due to the concentration of utility facilities in environmentally sensitive areas. Alternative 3 is similar to the Selected Alternative but would result in a longer utility corridor route that would affect more cultural resources.

- **NEPA Section 101 Requirement 6.** “Enhance the quality of renewable resources and approaching the maximum attainable recycling of depletable resources.”

The Selected Alternative would enhance the quality of renewable resources and approach maximum attainable recycling of depletable resources by reducing utility infrastructure in environmentally sensitive areas, and providing efficient utility service to developed areas. Alternative 1 would retain existing utility infrastructure dispersed throughout sensitive Valley resources. Alternative 3 is similar to the Selected Alternative but would result in a longer utility corridor route that would affect more cultural resources.

In conclusion, upon full consideration of the elements of Section 101 of NEPA, the Selected Alternative represents the environmentally preferable alternative for the East Yosemite Valley Utilities Improvement Plan. After review of potential resource and visitor impacts and developing mitigation for impacts to natural and cultural resources, the Selected Alternative achieves the greatest balance between the need to provide safe and efficient utility service to Valley facilities, while minimizing environmental impacts on the hydrological and biological processes in the Merced Wild and Scenic River in accordance with the Merced River Plan, and the protection and preservation of natural and cultural resources and visitor experience in the park.

WHY THE SELECTED ALTERNATIVE WILL NOT HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT

The East Yosemite Valley Utilities Improvement Plan is designed to provide efficient utility service for existing facilities and those proposed in the *Yosemite Valley Plan*. The *Yosemite Valley Plan* calls for a reduction in visitor and employee accommodations in the east Valley as well as a reduction in facilities and infrastructure in the River Protection Overlay. The utility relocation, improvements and upgrades proposed in the East Yosemite Valley Utilities Improvement Plan are consistent with those goals. The relocated utilities have been designed for an expected daily use of 18,241 visitors, including both overnight and day use visitors. As a result, the project will not cause an increase in the number of visitors in the Valley. Most of the proposed improvements address upgrading and modernizing utility equipment and facilities to meet currently accepted engineering standards for safety and reliability. This project is not designed to increase overall utility capacity and current limits on wastewater treatment and water supply will not change as a result of this project.

The Selected Alternative results in a reduction of utility infrastructure in environmentally sensitive areas, including river and creek beds and areas identified for ecological restoration.

Major utilities would be consolidated into corridors located under existing or proposed roads or in existing utility corridors. Although there will be short-term construction-related adverse effects associated with construction of the consolidated corridors and removal of the utilities in environmentally sensitive areas, the long-term ecological benefits of the Selected Alternative would more than compensate for the short-term adverse effects of construction.

Under the Selected Alternative, there will be local, short-term, minor, adverse impacts on soils associated with construction of utility corridors and removal of utilities in environmentally sensitive areas. However, the removal of utilities from highly valued soils in and around the river and floodplain would result in local, negligible to major, long-term benefits to wetland and other highly valued soils.

Overall, there will be local, long-term, minor, beneficial impacts to hydrologic processes and water quality due to the reduction of utility infrastructure within the river and creek beds and adjacent floodplain areas. There will be short-term, minor to moderate, adverse effects on hydrology and water quality related to construction and removal activities within the river and adjacent areas. These effects would be mitigated through use of Best Management Practices during construction. The Selected Alternative is consistent with the Merced River Plan elements of boundaries, classifications, zoning and the river protection overlay. A Section 7 analysis was completed and the project will not directly or adversely affect river values or free flow. The project will protect and enhance the Outstandingly Remarkable Values by reducing the number of utility crossings in the river and its tributaries, reducing the potential for future adverse effects. As discussed above, the project is designed based on the facilities and visitor use numbers identified in the *Yosemite Valley Plan*, which calls for a reduction in accommodations for visitors and employees within the River Protection Overlay, and on an expected daily use of 18,241 visitors in the Valley.

Under the Selected Alternative, there will be local, short-term, minor, adverse effects from construction and removal activities in wetland areas; however, there would be local, long-term, minor, beneficial effects on wetlands due to the reduction of utility infrastructure in wetland areas. The alternative would not substantially affect the size, integrity, or connectivity of wetlands in Yosemite Valley. The project complies with Executive Order 11990 (*Protection of Wetlands*) and Department of the Interior - Director's Order 77-1: *Protection of Wetlands*.

Overall, impacts to vegetation will include local, minor, short and long-term, adverse effects related to removal of vegetation during utility corridor construction. Construction related impacts to vegetation will be mitigated by minimizing the area disturbed, avoiding oak trees to the maximum extent feasible, controlling the importation of non-native plant species, developing revegetation and restoration plans, and monitoring the success of these plans. There would be local, long-term, minor to moderate, beneficial effects on meadow and riparian vegetation related to utility removals and restoration of more natural subsurface flows in these areas.

Implementation of the Selected Alternative will result in short and long-term, minor, adverse effects on wildlife and wildlife habitat from construction and removal activities. Construction related impacts to wildlife will be mitigated by minimizing the areas disturbed, surveying for the presence of sensitive wildlife species, timing construction to avoid sensitive time periods, and implementing Best Management Practices related to covering excavations, fencing areas, and refuse removal.

A total of 81 special-status species (59 wildlife and 22 plant species) have been considered in the evaluation of the East Yosemite Valley Utilities Improvement Plan. Species evaluated include federally listed threatened or endangered species; species of concern; state-listed threatened, endangered, and rare species; and species that are locally rare or threatened that are known to be or could be present within the planning area. The special-status species analysis focused on the

Wawona riffle beetle, Mariposa sideband snail, Sierra pygmy grasshopper, western pond turtle, 10 special-status bird species, 10 special-status bat species, and 14 special-status plant species.

Construction and removal activities under the Selected Alternative would have local, short-term, minor, adverse impacts on the special-status species in and adjacent to construction areas. Effects would be related to disturbance by heavy equipment and human intrusions, as well as vegetation removal, decreased oxygen levels, the addition of silt, resuspension of sediment, and the possible introduction of pollutants (i.e., fuels and lubricants). The Selected Alternative would also have localized, short and long-term, minor, adverse impacts on special-status bird and bat species which, in addition to the effects described above could also include disruption of breeding activities or loss of some nesting habitat. Local, short-term minor, adverse effects on special status plant species also include soil disturbance and compaction, as well as root damage, and spread of non-native species. Mitigation measures described in the *East Yosemite Valley Utilities Improvement Plan Environmental Assessment* would minimize the potential for impacts to these species or their habitat.

Local, short-term, negligible to minor, adverse impacts to air quality are anticipated from construction and removal activities associated with the Selected Alternative. In the long term, the project would have local, long-term, negligible, adverse effects on air quality related to the addition of two new emergency generators that are periodically run for short periods for testing.

Construction and removal activities associated with the Selected Alternative are anticipated to have local, short-term, moderate to major, adverse impacts on the local noise environment in the vicinity of construction activities. These impacts will be minimized through use of mufflers and other noise mitigation techniques. Over the long term, there would be no adverse effect on the ambient noise environment in the Valley.

Cultural resources consist of archeological sites, traditional cultural resources, and cultural landscapes. Under the Selected Alternative, construction and removal activities would involve ground disturbance and could result in local, long-term, adverse effects to cultural resources. Potential adverse effects on archeological resources associated with the Selected Alternative would be avoided where possible through detailed construction planning, and minimized by pre-construction testing and data recovery where required based on test results. Effects would also be mitigated through the use of archeological and American Indian monitors who would implement measures to avoid and minimize effects as necessary. All mitigation would be implemented in accordance with the 1999 Programmatic Agreement Among the National Park Service at Yosemite, The California State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Planning, Design, Construction, Operations and Maintenance, Yosemite National Park, California, and in consultation with associated American Indian tribes, as appropriate.

There are traditional cultural resources present in many areas affected by the Selected Alternative. The Selected Alternative would result in local, short-term, minor to moderate, adverse impacts to these traditional cultural resources. These impacts will be reduced to a minor intensity through implementation of mitigation measures that have been developed in consultation with local culturally affiliated tribal groups. The park will continue to consult and partner with culturally associated American Indian tribes to avoid and minimize impacts to traditional cultural resources.

The Selected Alternative will have local, short-term, minor, adverse effects on cultural and historic resources, such as the Valley Loop Trail and The Ahwahnee. These effects will be appropriately mitigated in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties and the Yosemite National Park Architectural Guidelines.

Construction activities associated with the Selected Alternative will result in local, short-term, moderate, adverse effects on scenic resources due to vegetation removal and the intrusion of

construction activities into scenic views. There would not be any long-term adverse effects on views from popular vantage points or views of scenic features.

The Selected Alternative would have local, short-term, minor to moderate, adverse effect to visitor experiences and recreation due to temporary changes in access to some areas, as well as noise and odors associated with construction activities. Effects will be minimized through development of a Visitor Communication and Protection Plan to communicate information on construction activities to the public and to safely and efficiently route visitors around construction areas. The adverse effects would be short-term in nature and there would not be any long-term adverse effects to visitor experiences and recreation.

Implementation of the Selected Alternative will result in local, short-term, minor to moderate, adverse impacts on traffic volumes, circulation, and delays associated with construction of utility corridors under major roadways. These impacts will be minimized through development of a Visitor Communication and Protection Plan as discussed above. The Selected Alternative would not adversely affect transportation in the long-term.

The Selected Alternative would result in a long-term, negligible to minor, adverse impact to park operations from an increased number of lift stations and electric transformers to maintain. Park operations will benefit from a reduction of utility infrastructure within river and creek beds, wetlands, and other environmentally sensitive areas where utilities are difficult to access, maintain, and repair.

The Selected Alternative would result in a local and regional, short-term, negligible, beneficial impact to the region's economy from the expenditures associated with construction and operation of the proposed utility facilities.

The *East Yosemite Valley Utilities Improvement Plan Environmental Assessment* analyzed cumulative impacts of the East Yosemite Valley Utilities Improvement Plan, and in no case were cumulative impacts considered significant. No elements of precedence have been identified, and implementation of the Selected Alternative will comply with federal, state, and local environmental protection laws.

NON-IMPAIRMENT OF PARK RESOURCES

Based on the analysis provided in the *East Yosemite Valley Utilities Improvement Plan Environmental Assessment*, the National Park Service concludes that implementation of the Selected Alternative would not impair a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Yosemite National Park,
- key to the natural or cultural integrity of Yosemite National Park or to opportunities for enjoyment of the park, and
- identified as a goal in the park's *General Management Plan* or other relevant National Park Service planning documents.

The Selected Alternative will cause short-term adverse construction-related impacts and negligible or minor adverse impacts to certain resources. The magnitude of these impacts is not sufficient to impair park resources. Consequently, implementation of the Selected Alternative will not violate the National Park Service Organic Act of 1916.

MITIGATION

To ensure that implementation of the proposed project protects natural resources, Outstandingly Remarkable Values, and the free-flowing condition of the Merced Wild and Scenic River, and that it minimizes and mitigates adverse effects to cultural resources, a consistent set of mitigation measures would be applied. As part of the environmental review, the National Park Service would avoid, minimize, and mitigate impacts to the extent practicable. As such, the project shall avoid or minimize impacts to natural and cultural resources and be designed to work in harmony with the surroundings. The project shall reduce, minimize, or eliminate air and water nonpoint source pollution. The project shall be sustainable whenever practicable by recycling and reusing materials, minimizing materials, and minimizing energy consumption during the project. The following mitigation measures (table 1-1) have been incorporated into the project to avoid or reduce impacts to park resources.

PUBLIC INVOLVEMENT AND COORDINATION

Public Involvement

On January 8, 2003, Yosemite National Park issued a press release announcing the initiation of public scoping for the Yosemite Valley Integrated Utility Master Plan, now called the East Yosemite Valley Utilities Improvement Plan. Information on the project was published on the park Web site and discussed in the Planning Update newsletter distributed in April 2003. Information on the project was also available at park Open Houses held monthly from February through July. Press releases announcing the availability of the environmental assessment, describing the proposed action, and requesting comments were issued on July 11, 2003.

Onsite Public Meetings

Information on the East Yosemite Valley Utilities Improvement Plan has been available at park Open Houses held monthly from February through August, 2003, at the Yosemite Valley Visitor Center, East Auditorium. In addition, information of the project was available at an Open House held by the park in Mariposa on June 23, 2003. The purpose of these meetings was to: (1) provide participants with an overview of existing conditions and the proposed action, (2) ask participants to identify key issues that should be analyzed during the environmental review and compliance process, and (3) provide an opportunity for participants to ask questions regarding project alternatives and the overall environmental review and compliance process. Dozens of individuals participated in discussions of the project with park staff over the course of these meetings. Issues discussed included road widths, utility corridor widths, utility capacities, and construction techniques for minimizing impacts.

Public Comment

The *East Yosemite Valley Utilities Improvement Plan Environmental Assessment* was released for a 30-day public review period beginning on July 18, 2003, and closing on August 18, 2003. On August 21, the National Park Service extended the public comment period to September 2, 2003, due to a discrepancy between the comment period closing date listed on the park web site and the comment period closing date listed in the cover letter in the environmental assessment. The environmental assessment was mailed to over 400 parties who had requested to be on the mailing list. The environmental assessment was also sent to dozens of public libraries, including the Mariposa County Public Library, the Oakhurst Public Library, the Los Angeles City Public Library, the San Francisco City Public Library, and many others. In addition, the National Park Service held regular Open Houses to disseminate information and collect informal written comments on the East Yosemite Valley Utilities Improvement Plan and other projects. Hundreds

Table 1-1. Impact/Mitigation Matrix

Mitigation Measure	Impact Topic	Responsibility	Critical Milestones
Pre-construction briefings will be required to educate construction crews on the measures required to protect natural and cultural resources.	Construction Mitigation Measures	Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Construction area boundaries, including staging areas, will be clearly marked to ensure that construction activities do not impact resources outside of the construction areas. All construction activity and storage of construction materials will occur within these marked areas. Construction and staging areas will be confined to the smallest area necessary.		Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Natural resources will be protected through the use of biological monitoring, erosion and sediment control, use of fencing or other means to protect sensitive resources adjacent to construction, removal of all food-related items or rubbish to bear-proof containers, topsoil salvage, and revegetation. Fencing will be used to mark the limits of allowed construction disturbance and to mark specific high value vegetation to be salvaged or preserved.		Yosemite National Park, Project Manager; Contractor	Concurrent with project activities
The requirements of the 1999 Programmatic Agreement Among the National Park Service at Yosemite, the California State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the Planning, Design, Construction, Operations, and Maintenance, Yosemite National Park, California, developed in consultation with seven culturally associated Native American groups and requiring review of project design, avoidance of sensitive cultural resource areas, monitoring of project activities as appropriate, and ongoing tribal consultation, will be implemented.		Yosemite National Park, Project Manager	Concurrent with project activities
Compliance monitoring will be implemented to ensure that the project remains within the parameters of NEPA and National Historic Preservation Act compliance documents, U.S. Army Corps of Engineers Section 404 permits, and other environmental permits and regulations. Compliance monitoring will ensure adherence to mitigation measures and will include reporting protocols.		Yosemite National Park, Project Manager	Concurrent with project activities
Water quality will be protected through the use of silt fences, sedimentation basins, and other control measures to reduce erosion, surface scouring, and discharge to water bodies. Excavated material shall be stored in upland areas and stabilized to prevent discharge into water bodies or wetlands.		Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Wetland areas will be delineated and marked. Adjacent or nearby wetland areas not in the construction area shall be fenced to ensure protection from construction activities.		Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
A noxious weed abatement program will be implemented. Construction equipment will be steam-cleaned and inspected to ensure that it arrives on-site free of mud or seed-bearing material; seeds and straw material shall be certified as weed-free; and areas of noxious weeds will be identified and treated pre-construction. Areas treated to remove noxious weeds will be revegetated with appropriate native species.		Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities

Mitigation Measure	Impact Topic	Responsibility	Critical Milestones
A spill prevention and pollution control program for hazardous materials will be implemented. The program will emphasize proper hazardous materials storage and handling procedures; will limit spill containment, cleanup, and reporting procedures; and will limit refueling and other hazardous activities to designated upland areas. Signs prohibiting refueling will be posted in sensitive areas. Equipment will be inspected prior to use each day to ensure that hydraulic hoses are tight and in good condition.	Construction Mitigation Measures (continued)	Contractor	Concurrent with project activities
A traffic control plan will be implemented to ensure that safe and efficient traffic flow is maintained during construction.		Yosemite National Park, Project Manager	Prior to and concurrent with project activities
A revegetation plan will be developed in consultation with culturally associated Native American Groups to ensure that salvage vegetation is used where possible and that native plants of native genotypes are used. Monitoring will occur during the revegetation period to ensure the success of the revegetation plan. Supplemental revegetation will be conducted if initial revegetation fails. Representatives of culturally associated Native American groups should be involved in the revegetation process from design through long-term maintenance and management of revegetated areas in areas of traditional plant resources.		Yosemite National Park, Project Manager	Concurrent with and following project activities
Place construction debris in refuse containers at least daily. Dispose of refuse at least weekly. No refuse will be burned or buried inside the park.		Contractor	Concurrent with project activities
All tools, equipment, barricades, signs, surplus materials, and rubbish shall be removed from the project area upon project completion and revegetation of disturbed areas.		Contractor	Upon completion of project activities
Soils will be salvaged and reused for fill where possible, particularly topsoil and wetland soils. Soil erosion will be minimized by minimizing the area disturbed, implementing erosion and sedimentation control measures, and revegetating areas	Soils	Contractor	Concurrent with project activities.
Construct the new utility corridor crossing of the Merced River using directional drilling if found to be technically and economically feasible. To determine the feasibility, geotechnical investigations will be completed at the proposed Merced River crossing and the results will be evaluated for the feasibility of incorporating directional drilling into the project design. The engineering feasibility analysis will be presented to park management for a final determination of feasibility.	Hydrology, Floodplains, and Water Quality	Yosemite National Park, Project Manager	Prior to project activities
Conduct all work within the bed or banks of the Merced River during seasonal low water periods.		Contractor	Concurrent with project activities
Develop and implement a Stormwater Pollution Prevention Plan to control erosion, sedimentation, and compaction and thereby reduce water pollution.		Contractor	Concurrent with project activities
Immediately remove hazardous waste materials from project sites.		Contractor	Concurrent with and upon completion of project activities
Dispose of volatile wastes and oils in approved containers for removal from construction sites to avoid contamination of soils, drainages, and watercourses.		Contractor	Concurrent with project activities
Inspect equipment for hydraulic and oil leaks prior to use on construction sites, and implement inspection schedules to prevent contamination of soil and water.		Contractor	Concurrent with project activities

Mitigation Measure	Impact Topic	Responsibility	Critical Milestones
Keep absorbent pads, booms, and other materials on site during projects that utilize heavy equipment to contain oil, hydraulic fluid, solvents, and hazardous material spills.		Contractor	Concurrent with project activities
Select fill materials to match the permeability of native soils, where possible. Where required, trench plugs will be used to ensure that placement of utility corridors do not create preferential groundwater pathways that could change natural groundwater flow patterns. Locations for trench plugs will be determined in consultation with park Resources Management personnel.		Yosemite National Park, Project Manager	Prior to project activities
Regrade and restore disturbed areas to pre-existing contours to maintain natural drainage patterns.		Contractor	Concurrent with and upon completion of project activities
Schedule construction activities during periods of low precipitation and low groundwater to reduce the risk of accidental hydrocarbon leaks or spills reaching surface and/or groundwater, and to reduce the potential for soil contamination and compaction.		Yosemite National Park, Project Manager	Prior to and concurrent with project activities
The design of all new structures will incorporate methods for minimizing flood damage as contained in the National Flood Insurance Program <i>Floodplain 44:60.3 Management Criteria for Flood-Prone Areas</i> (CFR,) and in accordance with any local, county, or state requirements for flood-prone areas.		Yosemite National Park, Project Manager	Prior to project activities
All utility corridors will be surveyed by qualified park staff during the design stage to identify any specific plant resources that should be avoided or salvaged. In particular, oak trees will be identified and avoided if at all feasible. All trees planned to be removed will be flagged prior to the survey for park staff approval.	Vegetation	Yosemite National Park, Project Manager	Prior to project activities
Develop and implement revegetation plans for all disturbed areas, requiring the use of native species from the same gene pool. Specify soil preparation, native seed/plant mixes, and mulching for all areas disturbed by construction activities. All fill derived from outside the park will be certified weed free.		Yosemite National Park, Project Manager Contractor	Prior to and concurrent with project activities
Develop and implement a monitoring plan to ensure successful revegetation, maintain plantings, and replace unsuccessful plant materials.		Yosemite National Park, Project Manager; Contractor	Concurrent with and following project activities
Salvage vegetation to the extent possible for use in revegetating areas disturbed by construction		Contractor	Concurrent with project activities
Enforce construction specifications regarding soil salvage and reuse, trenching, plant protection, and finished grading. Topsoil must be segregated and stored in bins to avoid mixing with other trench spoils, or an equally effective measure must be used to ensure adequate separation of topsoil.		Yosemite National Park, Project Manager	Concurrent with project activities
Limit disturbed areas as much as possible to minimize impacts to vegetation and avoid large trees, where possible.		Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Select base course and fill materials for compatibility with native granitic soils to minimize risk of encouraging non-native plant seeds. Monitor areas where fill is imported from outside the park, and eradicate non-native plants. Apply standard techniques to prevent non-native plant encroachment.		Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Develop and implement monitoring and mitigation plans for managing non-native plants within and immediately surrounding construction and developed areas.		Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities

Mitigation Measure	Impact Topic	Responsibility	Critical Milestones
Confine all construction operations to specified project work limits. Install temporary barriers to protect natural surroundings (including trees, plants, and root zones) from damage. Repair or replace damaged trees and plants, and avoid fastening ropes, cables, or fences to trees.		Contractor	Concurrent with project activities
Install fencing to minimize use of highly sensitive sites such as river edges and wetlands, and install signs as needed to direct use to more appropriate areas. Placement of fencing and signs would be developed in consultation with park cultural and natural resources staff		Yosemite National Park, Project Manager; Contractor	Concurrent with project activities
Use native or seed-free mulch to minimize surface erosion and introduction of non-native plants.		Contractor	Concurrent with project activities
Implement root rot management measures in areas where excavations will result in the removal of conifers or other infected trees.		Contractor	Concurrent with project activities
Comply with the <i>Vegetation Management Plan</i> (NPS1997), including minimization of irrigation systems, planting with native species appropriate to the site, or landscaping (if appropriate) with approved non-spreading, non-native plants for restoration of disturbed areas. Treatment within historic districts would be in accordance with the <i>Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes</i> .		Yosemite National Park, Project Manager	Upon completion of project activities
Wetland soils will be salvaged and reused as fill in wetland areas to the maximum extent possible.	Wetlands	Contractor	Concurrent with project activities
Wetland areas will be delineated and marked prior to the start of construction. Nearby or adjacent wetland areas not in the construction area shall be fenced to ensure protection from construction activities.		Contractor	Prior to and concurrent with project activities
Trench plugs will be used in wetland areas where required to ensure that new utility corridors and abandoned utility corridors do not become drainage conduits adversely affecting natural groundwater flow patterns. Locations for trench plugs will be determined in consultation with park Resources Management personnel.		Yosemite National Park, Project Manager	Prior to project activities
Prior to construction, evaluate habitat for species likely to occur and take steps to minimize impact on those species determined to be especially vulnerable.	Wildlife	Yosemite National Park, Project Manager	Prior to project activities
Limit the effects of light and noise on adjacent habitat through control of sources during construction.		Contractor	Concurrent with project activities
Install fencing and signs to protect sensitive habitats near the construction area from inadvertent access.		Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Schedule disruptive construction activities when effects on wildlife would be least (e.g., after nesting season of birds, and when bats are neither hibernating nor have young).		Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Preserve, whenever possible, natural features with obvious high value to wildlife, such as tree snags.		Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Maintain routes of escape from excavated pits and trenches for animals that might fall in. During construction, maintain vigilance for animals caught in excavations and take appropriate actions to free them.		Contractor	Concurrent with project activities
Provide procedures to limit the chance of pollution spills, both during construction and during subsequent repair and maintenance of completed facilities. This is especially important where activities are near aquatic or wetland habitats.		Contractor	Concurrent with project activities

Mitigation Measure	Impact Topic	Responsibility	Critical Milestones
Food-related refuse will be controlled reduce the chances of wildlife becoming conditioned to human food. Control measures will include disposal of food waste in animal-resistant receptacles of park-approved design; food on the project site must be stored in an animal-resistant container (e.g., a metal box); the project site will be surveyed for food residues at the end of each workday, and any residues will be collected and deposited in an animal-resistant trash receptacle.		Contractor	Concurrent with project activities
No garbage will be deposited in open-top construction dumpsters.		Contractor	Concurrent with project activities
To minimize adverse effects on nesting birds, construction activities in nesting habitat will be limited during breeding season (typically March to August), whenever possible.	Special-Status Birds	Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Trees or structures that contain unoccupied nests (stick nests or tree cavities), but must be removed, will be removed prior to March 1, or after nesting season is over.		Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
If activities take place during the breeding season, a qualified biologist would conduct a pre-construction survey for individuals no more than one week prior to construction in March through August. If any special-status species is observed nesting, and a determination is made that construction will impact an active nest or disrupt reproductive behavior, then avoidance strategies would be implemented. Construction would be delayed within 500 feet of such a nest, until a qualified biologist determines that the subject birds are no longer nesting or until any juvenile birds are no longer using the nest as their primary day and night roost.		Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Work activities within potential special-status aquatic species habitat will be completed during low-flow conditions.	Special-Status Aquatic Species	Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
A qualified biologist will survey the site two weeks before the onset of activities. If special-status aquatic species are found, the biologist will contact the appropriate agency(ies) to determine if moving any of these life-stages is appropriate.		Yosemite National Park, Project Manager	Prior to project activities
A qualified biologist will conduct training sessions for all construction personnel before activities begin.		Yosemite National Park, Project Manager	Prior to project activities
Where practicable, qualified biologists would permanently remove, from within the project area, any individuals of non-native species, such as bullfrogs, crayfish, and centrarchid fishes, to the maximum extent possible.		Yosemite National Park, Project Manager	Concurrent with project activities
Construction adjacent to aquatic habitats will be fenced to prohibit the movement of aquatic species into the construction area, and to control siltation and disturbance in aquatic habitats.		Contractor	Concurrent with project activities
All construction adjacent to or within aquatic habitats will be regularly monitored.		Yosemite National Park, Project Manager	Concurrent with project activities
Best Management Practices will be implemented to control erosion and prevent spills into aquatic habitats.		Contractor	Concurrent with project activities
During dewatering, intakes should be completely screened with wire mesh not larger than 5 millimeters to prevent aquatic species from entering the pump system. Water would be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any barriers to flow will be removed in a manner that allows flow to resume with the least disturbance to the substrate.		Contractor	Concurrent with and upon completion of project activities

Mitigation Measure	Impact Topic	Responsibility	Critical Milestones
The downstream construction boundary should be fenced to prohibit the movement of aquatic species into the construction area and to control creek siltation and disturbance to downstream riparian habitat. An enclosure fence should be installed in the creek channel both upstream and downstream of construction activities, as appropriate.		Contractor	Prior to and concurrent with project activities
Immediately after installation of the enclosure fence, a qualified biologist will inspect all areas within the fence for aquatic species.		Yosemite National Park, Project Manager	Prior to and concurrent with project activities
The project will comply with the California Regional Water Quality Control Board, Central Valley Region, Water Quality Certification Standard Conditions ensuring minimization of impacts to water quality and aquatic habitats.		Yosemite National Park, Project Manager; Contractor	Prior to , concurrent with, and upon completion of project activities
A qualified biologist will conduct surveys to determine whether affected structures, mature trees, or other habitat provide hibernacula, nursery colony, or roosting habitat.	Special-Status Bats	Yosemite National Park, Project Manager	Prior to project activities
If surveys conducted during the fall do not reveal any bat species, then the action should occur within three days in order to prevent the destruction of any bats that move into the area after the survey.		Yosemite National Park, Project Manager	Prior to and concurrent with project activities
If the site is being used as a winter roost, then the action should occur within either prior to hibernation (between September 1 and October 1) or after hibernation (January 15 to February 15).		Yosemite National Park, Project Manager	Prior to and concurrent with project activities
If spring surveys are conducted and reveal that the site is being used as a nursery colony, the action should not occur until after August 15, when the pups are weaned and are free-flying.		Yosemite National Park, Project Manager Contractor	Prior to and concurrent with project activities
A dust abatement program will be implemented. Clearing of vegetation will be minimized to the greatest extent possible, water or other compounds will be used to stabilize disturbed soils during construction, trucks hauling soil will be required to cover the soils during transport, and disturbed areas will be revegetated with native species after construction.	Air Quality	Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Construction noise will be minimized through the use of the best-available noise control techniques wherever feasible. Standard noise abatement measures could include the following elements: a schedule that minimizes impacts to adjacent noise-sensitive uses, use of the best-available noise control techniques wherever feasible, use of hydraulically or electrically powered impact tools when feasible, and location of stationary noise sources as far from sensitive uses as possible.	Noise	Contractor	Concurrent with project activities
Cultural resources will be protected by minimizing the areas to be disturbed, using fencing to protect sensitive resources adjacent to construction areas, and monitoring construction in appropriate areas.	Cultural Resources	Yosemite National Park, Project Manager; Contractor	Concurrent with project activities
An archeologist and American Indian monitor will be present during ground-disturbing activities.		Yosemite National Park, Project Manager	Concurrent with project activities
The 1999 Programmatic Agreement stipulates a process for the consideration of historic properties, including identification, evaluation, and, if necessary, mitigation of adverse effects. Standard mitigation measures will be used in situations where an undertaking would adversely affect a historic property. These may include documentation, interpretation, materials salvage, and National Register re-evaluation.		Yosemite National Park, Project Manager	Prior to and concurrent with project activities

Mitigation Measure	Impact Topic	Responsibility	Critical Milestones
Impacts to archeological resources will be mitigated by avoidance where possible, and through systematic subsurface testing and data recovery in accordance with the 1999 Programmatic Agreement when required. Systematic monitoring and data recovery will be implemented during construction when needed to avoid impacts.		Yosemite National Park, Project Manager	Prior to and concurrent with project activities
Mitigation measures will be incorporated into site-specific planning and design, including protecting archeological deposits from disturbance where possible, designing new construction in historic settings using compatible architectural style, and screening modern facilities from historic districts and traditional cultural resource use areas.		Yosemite National Park, Project Manager	Prior to and concurrent with project activities
Known human burials will be protected from disturbance, and the Native American Graves Protection and Repatriation Act will be implemented in the event of inadvertent discoveries.		Yosemite National Park, Project Manager	Prior to and concurrent with project activities
Impacts to traditional cultural resources will be mitigated through actions developed in consultation with culturally associated American Indian tribes. Mitigation measures identified through consultation to date, include: (1) minimize disturbance of areas not previously disturbed; (2) ensure tribal review of soil storage and disposal plans; (3) ensure topsoil salvage, segregation during storage, and reuse in the proper location and depth; (4) ensure the presence of a Native American monitor familiar with and knowledgeable about traditionally used plant resources during all ground disturbance (including clearing); (5) ensure reconnaissance of corridors in consultation with culturally associated tribal members knowledgeable about traditionally used plant resources during the design stage to identify any specific plants that should be salvaged and to gather information to be used in development of appropriate revegetation plans; (6) ensure tribal participation in development and implementation of revegetation plans, and in ongoing maintenance and use of the revegetated areas; (7) revegetate with appropriate site specific native species; and (8) develop a native plant nursery to salvage and propagate culturally significant plants found within the construction areas for use in revegetation.		Yosemite National Park, Project Manager	Prior to and concurrent with project activities
Schedule disruptive construction activities when effects on traditional cultural resources would be least (e.g., avoid areas during gathering periods for resources found in that area).		Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Construction detours should be planned to minimize the potential for indirect impacts on cultural resources associated with increased foot or vehicular traffic through areas with cultural resources.		Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Excavation areas should be protected from illegal collection of cultural materials or vandalism by limiting access to excavation sites and securing these areas during the night or any other periods where work is not actively underway.		Contractor	Concurrent with project activities
Above ground structures (generator housing and lift station controls) will be sited, designed, and constructed to minimize scarring to landscape features such as topography, views and vegetation.		Yosemite National Park, Project Manager	Prior to project activities
Above ground structures will be sited, designed, and constructed to minimize the visibility of the structures from roads, trails, and other public areas.		Yosemite National Park, Project Manager	Prior to project activities

Mitigation Measure	Impact Topic	Responsibility	Critical Milestones
Above ground structures will also be designed in conformance with the draft Design Guidelines for Yosemite Valley, which recommend architectural and landscape treatments to maintain the appropriate character for development within Yosemite Valley.		Yosemite National Park, Project Manager	Prior to project activities
All treatments to historic structures or within cultural landscapes will be undertaken in compliance with the <i>Secretary of Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes</i> .		Yosemite National Park, Project Manager	Prior to project activities
A visitor communications and protection plan will be developed to ensure that visitors are safely and efficiently routed around construction areas in Yosemite Valley. This plan will include means for communicating construction and closure schedules to the public, adequate barriers to keep visitors clear of active construction areas, and clear signage to direct visitors to open park destinations during construction.	Visitor Experience and Recreation	Yosemite National Park, Project Manager	Prior to and concurrent with project activities
A traffic control plan will be implemented to ensure that safe and efficient traffic flow is maintained during construction.	Transportation	Yosemite National Park, Project Manager	Prior to and concurrent with project activities
Design above ground facilities in accordance with draft Design Guidelines for Yosemite Valley as discussed above under Cultural Resources.	Scenic Resources	Yosemite National Park, Project Manager	Prior to project activities
Minimize development footprints and screen above ground facilities to minimize visibility from roads, paths, and other public areas.		Yosemite National Park, Project Manager	Prior to and concurrent with project activities

of people attended these meetings over the last several months and dozens participated in discussions with park staff on this project.

Comments received during the formal public comment period consisted of 21 letters, emails, and faxes from individuals and organizations. Analysis of this body of comments revealed a total of 69 distinct public concerns. Issues raised included the description of alternatives, the assessment of impacts on natural and cultural resources, compliance with the Wild & Scenic River Act, and issues related to utility capacity and Valley visitor capacity. None of the substantive comments received introduced relevant new information nor raised any issues not fully considered in the *East Yosemite Valley Utilities Improvement Plan Environmental Assessment*. Responses to the substantive comments and concerns are provided in the Errata Sheet (Part 2). No modifications to the Selected Alternative were made as a result of these public comments. Several of the public comments received requested the addition of nonsubstantive information or requested additional clarification. The information has been added to the environmental assessment through an Errata Sheet (Part 1). The Errata Sheet (Part 1) provides clarification that the project will not substantially change utility capacities within the Valley, nor will it result in widening Valley roads from their existing condition. The Errata Sheet (Part 1) also provides additional information on the limited type of construction activities that would be required to occur during nighttime hours, when wastewater flows are at their lowest level. The Errata Sheets will be distributed to all parties

that received a copy of the *East Yosemite Valley Utilities Improvement Plan Environmental Assessment* with instructions for the Errata Sheets to be attached to the original environmental assessment.

COORDINATION

U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers is coordinating with the U.S. Army Corps of Engineers regarding wetland permitting for the East Yosemite Valley Utilities Improvement Plan. A project briefing and site visit with the U.S. Army Corps of Engineers staff was conducted in March 2003. The National Park Service has submitted a Section 404 permit application to the U.S. Army Corps of Engineers and will ensure that a permit is in place before project implementation.

Central Valley Regional Water Quality Control Board

The National Park Service is currently coordinating with the Central Valley Regional Water Quality Control Board to obtain required Clean Water Act Section 401 Water Quality Certification. The Central Valley Regional Water Quality Control Board is serving as the lead agency for California Environmental Quality Act review required for the Clean Water Act Section 401 Water Quality Certification and this environmental assessment serves as the environmental review document for the California Environmental Quality Act process. The National Park Service may be required to submit a report of waste discharge, obtain waste discharge requirements, or an individual waiver. No project implementation will occur until the appropriate permits or approvals are in place.

U.S. Fish and Wildlife Service

The Endangered Species Act of 1973, as amended (16 USC 1531 *et seq.*), requires all federal agencies to consult with the U.S. Fish and Wildlife Service to ensure that any action authorized, funded, or carried out by the agency does not jeopardize the continued existence of listed species or critical habitat. The National Park Service requested a list of federally listed and other sensitive species that may be affected by the project in January 2003. The U.S. Fish and Wildlife Service responded in writing on February 23, 2003, fulfilling the requirements to provide species lists under section 7(c) of the Endangered Species Act. The U.S. Fish and Wildlife Service has determined that the East Yosemite Valley Utilities Improvement Plan is not likely to adversely affect any threatened or endangered species or critical habitat.¹

California State Historic Preservation Office

A Programmatic Agreement among the National Park Service at Yosemite, the California State Historic Preservation Officer, and the Advisory Council on Historic Preservation regarding Planning, Design, Construction, Operations and Maintenance, Yosemite National Park, California was developed in consultation with Native American tribes having cultural association with Yosemite National Park and was executed in October 1999. Pursuant to Article VI of the Programmatic Agreement, the review process for Section 106 of the National Historic Preservation Act of 1966, as amended, is being conducted in conjunction with this NEPA review process. The National Park Service has provided notice to the California State Historic Preservation Officer regarding this project and will continue consultation with them regarding avoidance and minimization of adverse effects to historic properties.

¹ U.S. Fish and Wildlife Service letter, August 12, 2003, Reference No. 1-1-03-2662.

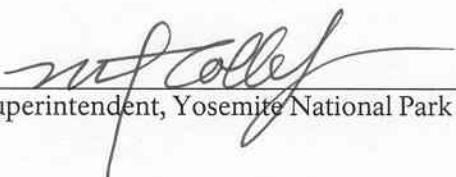
NATIVE AMERICAN CONSULTATION

National Park Service consultation with culturally affiliated American Indian groups occurred throughout the development of the *Yosemite Valley Plan*. Yosemite National Park is consulting with American Indian tribes having cultural association with Yosemite Valley, including the American Indian Council of Mariposa County, Inc. (Southern Sierra Miwuk Nation), the Tuolumne Me-wuk Tribal Council, and the Mono Lake Indian Community on proposed actions under the East Yosemite Valley Utilities Improvement Plan. Information sharing and project planning has included face to face consultation sessions with the Southern Sierra Miwuk Nation on February 27, April 24, May 29, and June 26, 2003. Consultation and partnering will continue with the Native American Indian tribes throughout the planning and implementation of the East Yosemite Valley Utilities Improvement Plan.

CONCLUSION

Based on the information contained in the *East Yosemite Valley Utilities Improvement Plan Environmental Assessment* as summarized above, the nature of comments from agencies and the public, and the incorporation of the mitigation measures to avoid or reduce potential direct, indirect, and cumulative impacts, it is the determination of the National Park Service that the Selected Alternative, including Route Option A, is not a major federal action significantly affecting the quality of the human environment. No long-term adverse impacts to floodplains or wetlands would occur from the Selected Alternative. Therefore, the National Park Service finds the Selected Alternative to be acceptable under Executive Order 11988 for the protection of floodplains and Executive Order 11990 for the protection of wetlands. Therefore, in accordance with the National Environmental Policy Act of 1969 and regulations of the Council on Environmental Quality (40 CFR 1508.9), an environmental impact statement will not be prepared. The Selected Alternative, including Route Option A, as detailed in the *East Yosemite Valley Utilities Master Plan Environmental Assessment* may be implemented immediately.

Recommended:




Superintendent, Yosemite National Park

11/14/03

Date

Approved:



Director, Pacific West Region, National Park Service

11/24/2003

Date

East Yosemite Valley Utilities Improvement Plan Environmental Assessment

Yosemite National Park

Errata Sheets: Part 1, Errors and Clarifications

The environmental assessment was available for public review and comment for a 30-day period from July 18, 2003 through August 18, 2003. On August 21, the comment period was extended to September 2, 2003. The comments received were screened to determine whether any new issues, reasonable alternatives, potential for significant impacts, or mitigation measures were suggested. The comments received did not identify new issues, alternatives, or mitigation measures, nor did they correct or add substantially to the facts presented in or increase the level of impact described in the environmental assessment. Comments in favor of or against the proposed action or alternatives, or comments that only agree or disagree with National Park Service policy are not considered substantive (i.e., they did not challenge the accuracy of the analysis, dispute information accuracy, suggest different viable alternatives, and/or provide new information that makes a change in the proposal). Several comments, although not substantive, did result in changes to the environmental assessment. No modifications to the Selected Alternative were made as a result of public comments on the environmental assessment. The park did, however, modify some individual route segments to further minimize impacts to highly valued resources, particularly California Black Oaks.

Changes to the environmental assessment are outlined below.

1. The section of the document on Regulations, Policies, and Management Goals has been revised to clarify that this document also serves as the environmental document for the California Environmental Quality Act review process. The Central Valley Regional Water Quality Control Board serves as the lead agency for the California Environmental Quality Act review process and Clean Water Act Section 401 Water Quality Certification process.

Page I-5, **Regulations and Policies**, the following sentence is added to the end of the paragraph.

“This environmental document also serves as the environmental document for the California Environmental Quality Act review process. The Central Valley Regional Water Quality Control Board serves as the lead agency for the California Environmental Quality Act review process and Clean Water Act Section 401 Water Quality Certification process.”

2. Changes were made regarding utility infrastructure in the Curry Village Employee Dormitory area based on the completed design for the housing project.

Page II-6, **Phase 1 – Improvements**, The eighth bullet is revised as follows:

- Curry Village Dormitory ~~Utility Corridor and~~ Electric Transformer

3. Changes were made regarding utility infrastructure in the Curry Village area based on the completed design for the employee housing project in this area.

Page II-11, **Curry Village**, The first full paragraph is revised as follows:

~~“A new Curry Village Dormitory Utility Corridor would provide an underground electric corridor and Electric Transformer would be constructed above ground at to the proposed employee housing area, buildings, and a wastewater upgrade would be constructed into Curry Village to replace an existing gravity wastewater line (Curry Village Gravity Wastewater Line Replacement). These wastewater line improvements would require excavations for these along the corridors; however, corridor the construction would be coordinated with construction of other proposed improvements in the Curry Village area.”~~

4. Multiple commentors requested clarification regarding how construction of utility corridors under existing roadways would affect road widths.

Page II-13, **Utility Corridor Construction**, the third paragraph is revised as follows:

“As shown in Figures II-27 and II-28 all utilities placed in road corridors are expected to be placed within the ~~26-foot roadway easement existing roadway footprint. No roads are proposed to be widened under this project.~~ Wastewater manholes would also be located within the road corridor. Electric and communications access manholes would have to occur outside of the road travel lanes and be located just off of the shoulder of the road. This would extend the disturbance area to 10 feet beyond the roadway lanes at access points. These access points would be sited to avoid impacts to mature trees along the roadside. Disturbance area estimates were developed to assist in evaluating the impacts of the proposed utility corridors. Although the utility corridors themselves ~~are not expected to exceed 26 feet~~ would not exceed the existing road widths, a 100-foot corridor has been used to conservatively estimate impacts and to account for access to work areas and equipment maneuvering requirements. Merced River crossings have been analyzed with a 150-foot corridor to conservatively account for additional effects associated with working in the river.”

In addition, Figures II-27 and II-28 have been retitled to “Typical Utility Corridor Cross Sections” and a note has been added to these figures stating “Road widths shown are approximate. Utilities will be placed within existing road footprints and Valley roads will be replaced at their existing widths.”

5. Commentors requested clarification on construction activities that would occur during nighttime hours.

Page II-15, **Construction of Lift Stations**, a new sentence was added to the end of the section, as follows:

“Nighttime construction activities will include those activities technically required to occur at night, such as activities associated with implementing wastewater system bypasses to allow new lift stations to be connected into the wastewater system. These activities will be minimized by constructing as much of the bypass system as possible during daytime hours and limiting nighttime activities to the minimum required to implement the by-pass and tie in the lift stations. Since there are a limited number of lift stations in each construction phase, these nighttime activities would be minimal.”

6. The discussion of the electric transformer at the Curry Village Dormitory was modified to reflect more recent design information on the housing area.

Page II-15, **Construction of New Electric Transformers**, the second paragraph was revised as follows:

“New transformers are proposed for the Upper Pines Campground, Lower Pines Lift Station, Curry Village Dormitory, the proposed North Pines Amphitheater, Housekeeping Camp Lift Station, Tenaya Creek Campground Lift Station, and the proposed Yosemite Village Transit Center. The transformer sites are expected to consist of underground, pre-cast concrete vaults

containing submersible electric transformers and associated electrical lines. The transformers are expected to occupy approximately 200 square feet and be approximately 4 feet deep. The transformer at the Curry Village Dormitory is expected to be above ground and pad-mounted and screened with a fence.”

7. Commentors requested clarification of the project’s affect on Valley utility capacities and existing capacity limits on the Valley wastewater system.

Page II-16, **Current Water Supply and Wastewater Treatment Capacity Does Not Change**, the following revisions have been made.

“All of the alternatives under consideration would maintain the existing wastewater treatment capacity at the El Portal Wastewater Treatment Plant, ~~as well as the current water supply capacity of the park water wells and water storage tank~~ which is currently the limiting factor on the Valley’s wastewater system capacity. ~~Similarly, no alternatives change the capacity of the park’s groundwater wells or the water storage tank used to provide potable water to Valley facilities.~~ The utility relocations, improvements, and upgrades proposed in this project ensure that Valley utilities can efficiently serve existing facilities and those identified in the *Yosemite Valley Plan*. The *Yosemite Valley Plan* calls for a reduction of visitor and employee accommodations in the Valley and for a reduction in facilities and infrastructure in the River Protection Overlay. The utility relocations, improvements, and upgrades are designed to meet these goals. The proposed improvements are not designed to increase overall utility capacity, nor to accommodate greater numbers of employees and visitors, but to improve park utility operations by upgrading and modernizing equipment and facilities to meet currently accepted engineering safety and reliability standards. None of these improvements are expected to increase the number of visitors or employees accommodated in the Valley river corridor. ~~None of the alternatives propose changes to wastewater treatment or water supply capacity.”~~

8. A Commentor asked for clarification on whether the mitigation measures applied to Alternative 1 the No Action Alternative.

Page II-20, the heading **Mitigation Measures Common to All Action Alternatives** has been changed to **Mitigation Measures Common to All Alternatives**, and the paragraph below the heading has been revised to read as follows:

“The National Park Service places a strong emphasis on avoidance, minimization, and mitigation of impacts. To help ensure that implementation of the proposed East Yosemite Valley Utilities Improvement Plan and all activities associated with implementation of the repairs required to the existing wastewater system under all three alternatives protects natural and cultural resources and the quality of the visitor experience, mitigation measures have been developed and would be implemented in accordance with the guidance of the Merced River Plan and the *Yosemite Valley Plan*. “

In addition, Figure II-22 has been revised to reflect these changes.

9. The Housekeeping Utility Corridor has been refined by the park to further minimize impacts to mature trees in the Housekeeping Area.

Page II-11, **Housekeeping Camp**, third sentence has been revised as follows:

“A new Housekeeping Utility Corridor would provide wastewater, ~~and communications and electric~~ electric service from the Southside Drive Utility Corridor, ~~then along the Housekeeping Camp access road, to the west along the Housekeeping Camp access road, through a clearing in the camp area~~ to a proposed new Housekeeping Lift Station and electric transformer.”

In addition, Figure II-23 has been revised to reflect this change.

10. The Yosemite Village West Wastewater Realignment has been refined by the park to reduce impacts to mature California Black Oak trees along Northside Drive.

Page II-12, **Yosemite Village**, the first full sentence is revised to read as follows:

“The gravity wastewater lines from Yosemite Village (Yosemite Village West Wastewater Realignment) would be routed down along Village Drive, ~~and Northside Drive to the lift station then to the southeast to meet with Northside Drive, and would then follow Northside Drive to the east to the proposed Transit Center Lift Station.~~”

In addition, Figure II-24 has been revised to reflect this change.

11. Route Option A in the Camp 6/Cook’s Meadow area was refined by the park to further reduce potential impacts to mature California Black Oaks near Residence One.

Page II-12, **Camp 6/Cook’s Meadow**, the fourth paragraph has been revised to read as follows:

“During consultation with culturally associated tribes regarding the effects of the proposed Yosemite Creek Utility Corridor route on a traditional cultural resource area, a second option for the Yosemite Creek Utility Corridor was proposed. This potential option, referred to as Route Option A, would leave Northside Drive approximately ~~150~~ 200 feet east of the access road to Residence One, and ~~head then travel~~ diagonally to the southwest toward an existing water hydrant located at the northeast corner of Residence One, and then ~~following the access road to the parking area where it would head east toward Yosemite Creek just north of the Residence One parking area.~~ This route would cross Yosemite Creek ~~at the same~~ just north of the location as the corridor described above (Figure II-25). This option is ~~approximately 100 feet slightly~~ shorter, but does cross the bike trail to the east of Residence One and through some previously undisturbed wooded areas. The route affects the same archeological site as the proposed route, but affects less traditional resources, such as California Black Oak, mushrooms, and other traditionally used plants. Because consultation with the tribes is continuing on the effects of the proposed route and this option, the option has been incorporated into the analysis of Alternative2. Each section of the analysis in Chapter 4, will briefly address the difference between the proposed route and Route Option A for the Yosemite Creek Utility Corridor.”

In addition, Figure II-25 has been revised to reflect this change.

12. Figure II-26 has been revised to reflect the routing refinements discussed above for Figures II-22 through II-25.
13. Table II-1, **Summary Comparison of Key Features of the Alternatives**, has been revised to reflect updated design information for the employee housing project in the Curry Village area.

Page II-31, Table II-1, **Summary Comparison of Key Features of the Alternatives**, has been revised as shown on the following table

14. An error on Alternative III in Table II-2, **Summary of Environmental Consequences**, has been corrected to be consistent with the soils analysis in Chapter IV, which states that after mitigation impacts to soils would be minor.

Page II-33, Table II-2, **Summary of Environmental Consequences**, under Alternative III, the third paragraph has been revised as shown on the following table.

Table II-1 (Continued)
Summary Comparison of Key Features of the Alternatives

Key Features	Alternative 1 No Action	Alternative 2 East Yosemite Valley Utilities Improvement Plan with Merced River Crossing at Housekeeping Camp	Alternative 3 East Yosemite Valley Utilities Improvement Plan with Merced River Crossing near Sentinel Bridge
DESCRIPTION OF ACTIVITIES (continued)			
Curry Village	Replace 1,500 ft Wastewater Line, Pipe Burst 300 ft Wastewater Line, Spot Repairs	Replace 1,500 ft Wastewater, Pipe Burst 300 ft Wastewater, Spot Repairs; New Curry Village Utility Corridor 2,000 ft; New Curry Village Lift Station; New Southside Drive Utility Corridor 1,300 ft; New Curry Village Dormitory Utility Corridor 900 ft; New Curry Village Dormitory Electric Transformer; Curry Village Wastewater Replacement 1,000 ft; Remove Existing Water Line through Stoneman Meadow	Same as Alternative 2

Table II-2
Summary of Environmental Consequences

Alternative 1 No Action	Alternative 2 East Yosemite Valley Utilities Improvement Plan with Merced River Crossing at Housekeeping Camp	Alternative 3 East Yosemite Valley Utilities Improvement Plan with Merced River Crossing near Sentinel Bridge
NATURAL RESOURCES SOILS		
<p>Approximately 31 acres would be disturbed: 14 acres of highly valued soils, 12 acres of resilient soils, and 5 acres of other soils. All of the proposed work is in areas that have been previously disturbed by utility installation and maintenance. Alternative 1 would result in local, short-term and long-term, negligible to moderate, adverse effects on soils from construction activities and continued disruption of subsurface water flows in areas designated for ecological restoration in the <i>Yosemite Valley Plan</i>. Implementation of mitigation measures to minimize spills, soil compaction, and soil erosion are expected to reduce soil impacts in these previously disturbed soils to a minor intensity. There would continue to be local, long-term, minor, indirect effects on soils from ongoing disruptions of natural subsurface flows and resultant effects on soil characteristics over time.</p> <p>Alternative 1 and the cumulative projects would have a local, long-term, negligible to minor, beneficial impact to soils. Restoration projects identified in the <i>Yosemite Valley Plan</i> are expected to result in restoration of up to 177 acres of soils. Alternative 1 leaves utility infrastructure in place in the areas identified for restoration, reducing the potential soil benefits from the ecological restoration efforts identified in the <i>Yosemite Valley Plan</i>.</p>	<p>Approximately 116 acres would be disturbed by utility repairs and utility corridor construction, including 29 acres of highly valued soils, 61 acres of resilient soils, and 25 acres of other soils. Most of the proposed work is in areas that have been previously disturbed by utility installation and maintenance, campground development, or construction of roadways and trails. These activities would result in local, moderate to major, short and long-term, adverse effects on soils. Implementation of mitigation measures to minimize spills, soil compaction, and soil erosion, as well as soil salvage and reuse and use of trench plugs where needed, are expected to reduce adverse soil impacts to a minor intensity.</p> <p>Utility abandonment and removal would disturb approximately 99 acres of soils, including 77 acres of highly valued soils, 17 acres of resilient soils, and 5 acres of other soils. Although these activities would result in short-term, moderate to major, adverse effects, removal of the utilities from ecologically sensitive areas would result in negligible to major, long-term, beneficial effects to soils from allowing natural groundwater flow processes to reestablish. In addition, removal of utilities in the areas proposed for ecological restoration in the <i>Yosemite Valley Plan</i> will facilitate the restoration and resultant benefits.</p> <p>Overall, Alternative 2 would result in local, short-term, minor, adverse effects on highly valued soils, and local, long-term, major beneficial effects on highly valued soils.</p> <p>Alternative 2 and the cumulative projects would have a local, long-term, minor, beneficial impact to soils. Restoration projects identified in the <i>Yosemite Valley Plan</i> are expected to result in restoration of up to 177 acres of soils. Alternative 2 would enhance the potential benefits from restoration activities by removing utility infrastructure from areas identified for restoration, enhancing the potential beneficial effects to soils over time.</p>	<p>Approximately 118 acres would be disturbed by utility repairs and utility corridor construction, including 27 acres of highly valued soils, 62 acres of resilient soils, and 29 acres of other soils. Most of the proposed work is in areas that have been previously disturbed by utility installation and maintenance, campground development, or construction of roadways and trails. These activities would result in moderate to major, long- and short-term, adverse effects on soils. Implementation of mitigation measures to minimize spills, soil compaction, and soil erosion, as well as soil salvage and reuse and use of trench plugs where needed, are expected to reduce adverse soil impacts to a minor intensity.</p> <p>Utility abandonment and removal would disturb approximately 99 acres of soils, including 77 acres of highly valued soils, 17 acres of resilient soils, and 5 acres of other soils. Although this would result in short-term, minor to major, adverse effects, removal of the utilities from ecologically sensitive areas would result in negligible to major, long-term, beneficial effects to soils from allowing natural groundwater flow processes to reestablish. In addition, removal of utilities in the areas proposed for ecological restoration in the <i>Yosemite Valley Plan</i> will facilitate the restoration and resultant benefits.</p> <p>Overall, Alternative 3 would result in local, short-term, major <u>minor</u>, adverse, effects and local, long-term, major, beneficial effects on highly valued soils.</p> <p>Alternative 3 and the cumulative projects would have an effect similar to that of Alternative 2 for soils.</p>

15. The project's potential for growth inducing effects has been addressed as required under the California Environmental Quality Act (CEQA).

Page III-2, **Land Use**, has been revised to include the following sentence at the end of the section:

“This project affects only utility service within Yosemite National Park and is in compliance with the Yosemite Valley Plan. The project does not substantially change the capacity of Valley utilities. Although construction of the project will result in some negligible economic benefits, the project is not expected to foster long-term economic or population growth, nor to result in construction of additional housing in the surrounding areas. Therefore, the project is not expected to have any growth inducing effects inside or outside park boundaries.”

16. The tables in Chapter IV for soils and vegetation have been revised to reflect the routing refinements discussed above in Chapter II. (The routing refinements did not affect wetland acreages.) The acreage changes are very small and in most cases, reduce impacts to highly valued resources, therefore the analysis of impacts for these sections has not been revised.

Table IV-7, **Soils Impacts Associated with Alternative 2**, on page IV-76 is revised as follows:

Table IV-7

Soil Impacts Associated with Alternative 2

Subarea	Highly Valued Soils (acres)	Resilient Soils (acres)	Other Soils (acres)	Total (acres)
Curry Village				
Repairs/Construction	0.3	8.6 <u>6.7</u>	4.9 <u>5.1</u>	13.8 <u>12.1</u>
Removal/Abandonment	1.8	0.9	1.9	4.6
Housekeeping Camp				
Repairs/Construction	3.2 <u>2.8</u>	4.5 <u>1.8</u>	2.9 <u>3.1</u>	7.6 <u>7.7</u>
Removal/Abandonment	1.4	--	--	1.4
Yosemite Village				
Repairs/Construction	6.9	16.0 <u>16.7</u>	3.0	25.9 <u>26.6</u>
Removal/Abandonment	--	3.8	0.1	3.9
Total by Type				
Repairs/Construction	29.3 <u>28.9</u>	61.4 <u>60.5</u>	25.4 <u>25.8</u>	116.1 <u>115.2</u>
Removal/Abandonment	77.1	17.0	5.4	99.5

^a Includes repairs to existing wastewater lines as described in Alternative 1, as well as construction of proposed consolidated utility corridors.

Table IV-9, **Vegetation Community Types Potentially Affected by Alternative 2**, on page IV-93 is revised as follows:

Table IV-9
Vegetation Community Types Potentially Affected by Alternative 2

Subarea	Mixed Conifer (acres)	Meadow (acres)	Riparian (acres)	Oak (acres)	Other (acres)	Total (acres)
Curry Village						
Repairs/Construction	7.8		0.1	2.2 <u>0.7</u>	3.7 <u>3.5</u>	13.8 <u>12.1</u>
Removal/Abandonment	2.0	1.9	0.3	0.4	--	4.6
Housekeeping Camp						
Repairs/Construction	7.3 <u>7.4</u>	--	0.1	--	0.2	7.6 <u>7.7</u>
Removal/Abandonment	1.4	--	--	--	--	1.4
Yosemite Village						
Repairs/Construction	9.0 <u>9.1</u>	2.8	0.2	9.4 <u>10.0</u>	4.5	25.9 <u>26.6</u>
Removal/Abandonment	0.1	0.2	--	2.3	1.3	3.9
Camp 6/Cook's Meadow						
Repairs/Construction	4.2	0.8	2.6	0.6	1.0	9.2
Removal/Abandonment	2.7	1.6	2.2	0.5	1.7	8.7
Total by Type						
Repairs/Construction	69.6 <u>69.8</u>	6.3	12.4	13.6 <u>12.7</u>	14.2 <u>14.0</u>	116.1 <u>115.2</u>
Removal/Abandonment	58.2	16.4	10.4	5.2	9.3	99.5

^a Includes repairs to existing wastewater lines as described in Alternative 1, as well as construction of proposed consolidated utility corridors.

17. The discussion of floodplains was revised to clarify that lift stations and transformers within the floodplain would be submersible.

Page IV-81, **Hydrology, Floodplains, and Water Quality**, the last sentence in the first paragraph under Analysis was revised as follows.

“Proposed lift stations and electric transformers to be constructed in the floodplain under this alternative would be designed to be submersible and would be placed underground to reduce the potential for adverse effects from flood events.”

18. Commentors requested clarification of the construction activities that would occur at night, and the impact that this might have on wildlife, noise, and visitor experience. The discussion of potential adverse effects in the analysis section has been revised to acknowledge the limited nighttime activities. The discussion of the intensity of adverse effects does not change from that documented in the environmental assessment.

Page IV-100, **Wildlife**, the first paragraph under Analysis has been revised to read as follows:

“Implementation of Alternative 2 could disturb wildlife in the vicinity of construction activities. Effects would be related to heavy equipment and human intrusion and could include noise, dust generation, vegetation removal, trench excavation, or decreased oxygen levels in aquatic habitats. Nighttime construction activities would include those activities technically required to occur at night (during low utility usage periods), such as activities associated with implementing wastewater system bypasses to allow new lift stations to be connected into the wastewater system. These activities will be minimized by constructing as much of the bypass system as possible during daytime hours and limiting nighttime activities to the minimum required to implement the by-pass and tie in the lift stations. Since there are a limited number of lift stations in each construction phase, these nighttime activities would be minimal. In general, construction activities ~~These actions~~ could result in direct losses of nests, burrows, and wildlife, and indirect effects through the disturbance of nesting birds or roosting bats. The addition of pollutants (i.e.,

fuels or lubricants) related to equipment operations in these areas could degrade the quality of the environment and the wildlife habitat it provides. In addition, localized, long-term, adverse effects to wildlife due to routine clearance of vegetation at utility access manholes may also occur as a result of Alternative 2.”

Page IV-112, **Noise**, has been revised to include the following sentence at the end of the Analysis paragraph:

“Nighttime construction activities would include those technically required to occur at night (during low utility usage periods), such as activities associated with implementing wastewater system bypasses to allow new lift stations to be connected into the wastewater system. These activities will be minimized by constructing as much of the bypass system as possible during daytime hours and limiting nighttime activities to the minimum required to implement the by-pass and tie in the lift stations. Since there are a limited number of lift stations in each construction phase, these nighttime activities would be minimal.”

Page IV-127, **Visitor Experience and Recreational Resources**, has been revised to include the following sentence at the end of the first paragraph under Analysis:

“Although the majority of construction activities will occur during daytime hours, there are some construction activities that must occur at night. Nighttime construction activities would include those technically required to occur at night (during low utility usage periods), such as activities associated with implementing wastewater system bypasses to allow new lift stations to be connected into the wastewater system. These activities will be minimized by constructing as much of the bypass system as possible during daytime hours and limiting nighttime activities to the minimum required to implement the by-pass and tie in the lift stations. Since there are a limited number of lift stations in each construction phase, these nighttime activities would be minimal.”

19. This environmental assessment also serves as the California Environmental Quality Act document for the Clean Water Act Section 401 Water Quality Certification review by the Central Valley Regional Water Quality Control Board.

Page VI-2, Central Valley Regional Water Quality Control Board, has been revised by adding the following sentence to the end of the paragraph:

“This environmental assessment serves as the California Environmental Quality Act document for the Clean Water Act Section 401 Water Quality Certification review by the Central Valley Regional Water Quality Control Board.”

20. The List of Preparers was corrected.

The **List of Preparers** on page VII-1 has been revised as follows.

<i>National Park Service, Yosemite National Park</i>			
Phyllis Harvey	Visitor and Resource Protection	B.A. Political Science <u>Graduate work in Public Administration</u>	<u>12-NPS</u> <u>14 NPS</u> <u>22 other</u>

National Park Service, Denver Service Center			
Dave Kreger	NEPA Compliance	B.S. Environmental Resource Management	10 NPS 13 other
Gary Smillie	Water Resources	M.S. Civil Engineering B.S. Hydrology and Water Resources	17 NPS 7 other
Frank Willis	Cultural Resources	M.A. History B.A. History	24 NPS Retired
Joel Wagner	Wetland Program Lead Water Resources Division	M.S. Environmental Science B.A. Biology	23 NPS

21. As a result of the finalization of wetland delineations, the following changes have been made to the tables listing wetland impacts for Alternatives 1, 2 and 3. The changes are minor and the discussion of the intensity of effects for the various alternatives does not change.

Table IV-4, Wetland and Aquatic Habitats Potentially Affected by Alternative 1, on page IV-34, is revised as follows:

Table IV-4
Wetland and Aquatic Habitats Potentially Affected by Alternative 1

Subarea	Riverine upper perennial (acres)	Palustrine forest (acres)	Palustrine scrub shrub (acres)	Palustrine emergent (acres)	Total (acres)
Camp 6/Cook's Meadow	0.07	0.11	--	0.58 <u>0.61</u>	0.76 <u>0.79</u>
Total by Type	0.81	0.16	0.01	2.84 <u>2.87</u>	3.82 <u>3.85</u>

Table IV-8, Wetland and Aquatic Habitats Potentially Affected by Alternative 2, on page IV-87, is revised as follows:

Table IV-8
Wetland and Aquatic Habitats Potentially Affected by Alternative 2

Subarea	Riverine upper perennial (acres)	Palustrine forest (acres)	Palustrine scrub shrub (acres)	Palustrine emergent (acres)	Total (acres)
Campgrounds					
Repairs/Construction	0.64	0.04 <u>0.05</u>	0.07	0.25 <u>0.20</u>	1.00 <u>0.96</u>
Removal/Abandonment	1.04	0.65 <u>0.66</u>	0.28 <u>0.30</u>	0.07	2.04 <u>2.07</u>
Ecological Restoration Area					
Repairs/Construction	0.46	0.19 <u>0.20</u>	0.05 <u>0.08</u>	--	0.70 <u>0.74</u>
Removal/Abandonment	1.78	0.38	--	5.69	7.85
Curry Village					
Repairs/Construction	--	0.03	--	0.11 <u>0.04</u>	0.14 <u>0.07</u>
Removal/Abandonment	--	0.01	--	1.07	1.08
Yosemite Village					
Repairs/Construction	--	--	--	0.99 <u>1.05</u>	0.99 <u>1.05</u>
Removal/Abandonment	--	--	--	<0.01	<0.01
Camp 6/Cook's Meadow					
Repairs/Construction	0.67	0.19	--	0.96 <u>0.79</u>	1.82 <u>1.65</u>
Removal/Abandonment	0.12	0.35	--	1.35 <u>1.39</u>	1.82 <u>1.86</u>
Total by Type					
Repairs/Construction	1.96	0.45 <u>0.47</u>	0.12 <u>0.15</u>	3.35 <u>3.12</u>	5.88 <u>5.70</u>
Removal/Abandonment	2.94	1.39 <u>1.40</u>	0.28 <u>0.30</u>	15.51 <u>15.55</u>	20.12 <u>20.19</u>

a Includes repairs to existing wastewater lines as described in Alternative 1, as well as construction of proposed consolidated utility corridors.

Table IV-11, Wetland and Aquatic Habitats Potentially Affected by Alternative 3, on page IV-141, is revised as follows:

Table IV-11
Wetland and Aquatic Habitats Potentially Affected by Alternative 3

Subarea	Riverine upper perennial (acres)	Palustrine forest (acres)	Palustrine scrub shrub (acres)	Palustrine emergent (acres)	Total (acres)
Campgrounds					
Repairs/Construction	0.64	0.04 <u>0.05</u>	0.07	0.25 <u>0.20</u>	1.00 <u>0.96</u>
Removal/Abandonment	1.04	0.65 <u>0.66</u>	0.28 <u>0.30</u>	0.07	2.04 <u>2.07</u>
Ecological Restoration Area					
Repairs/Construction	0.46	0.49 <u>0.20</u>	0.05 <u>0.08</u>	--	0.70 <u>0.74</u>
Removal/Abandonment	1.78	0.38	--	5.69	7.85
Curry Village					
Repairs/Construction	--	0.03	--	0.11 <u>0.04</u>	0.14 <u>0.07</u>
Removal/Abandonment	--	0.01	--	1.07	<u>1.08</u>
Yosemite Village					
Repairs/Construction	--	--	--	0.99 <u>1.05</u>	0.99 <u>1.05</u>
Removal/Abandonment	--	--	--	<0.01	<0.01
Camp 6/Cook's Meadow					
Repairs/Construction	0.50	0.12	--	0.34 <u>0.14</u>	0.93 <u>0.76</u>
Removal/Abandonment	0.12	0.35	--	1.35 <u>1.39</u>	1.82 <u>1.86</u>
Total by Type					
Repairs/Construction	1.79	0.38 <u>0.40</u>	0.12 <u>0.15</u>	2.70 <u>2.47</u>	4.99 <u>4.81</u>
Removal/Abandonment	2.94	1.39 <u>1.40</u>	0.28 <u>0.30</u>	15.54 <u>15.55</u>	20.12 <u>20.19</u>

a Includes repairs to existing wastewater lines as described in Alternative 1, as well as construction of proposed consolidated utility corridors.

22. A commentor noted that effects to special-status species were not included in the biological section of table C-2.

Appendix C, table C-2, on page C-12, has been revised as follows:

Table C-2
Effects of the Proposed Action on Outstandingly Remarkable Values in the Valley Segment of the Merced Wild and Scenic River Corridor

Outstandingly Remarkable Value	Effects of the Proposed Action
<p>Biological – Riparian areas and low-elevation meadows are the most productive communities in Yosemite Valley. The high quality and large extent of riparian, wetland, and other riverine areas provide rich habitat for a diversity of river-related species, including special-status species, neotropical migrant songbirds, and numerous bat species.</p>	<p>The proposed action would have short-term, adverse, effects to riparian and aquatic habitat, <u>and special-status species</u> in the Valley segment related to construction of the proposed new utility river crossing, replacement of two other utility river crossings, and removal of several utility river crossings. Implementation of Best Management Practices and site restoration would result in minor effects. Refer to the <i>East Yosemite Valley Utilities Improvement Plan Environmental Assessment</i>, Chapter II, Alternatives, for mitigation measures incorporated into the proposed action. Removal of existing utility infrastructure within the areas designated for ecological restoration is expected to enhance the mixture of riparian and wetland habitats in the east Valley segment of the river. This would have a beneficial effect on the biological Outstandingly Remarkable Value for the Valley segment of the river.</p>

East Yosemite Valley Utilities Improvement Plan
Environmental Assessment

Yosemite National Park

Errata Sheets: Part 2, Summary of Substantive Public Comments and Responses

INTRODUCTION

The National Park Service in Yosemite National Park proposes to implement an East Valley Utilities Improvement Plan to develop consolidated utility corridors, remove utility infrastructure from environmentally sensitive areas, and to allow for ecological restoration of areas identified in the *Yosemite Valley Plan*.

Over the last several decades, the existing utility infrastructure serving Yosemite Valley was developed incrementally as needed. A variety of different underground utility corridors were constructed throughout the Valley to provide service to developed areas. As a result, there has been no unified approach to infrastructure design, and these utility lines criss-cross their way around the Valley. Wastewater, potable water (referred to hereafter as water), electric, and communication lines are located primarily in individual underground corridors, with multiple utility corridors currently serving the same developed areas. Some of these utility corridors cross through meadows identified in the *Yosemite Valley Plan* for ecological restoration, as well as other environmentally sensitive areas.

In order to implement many of the actions called for in the *Yosemite Valley Plan*, existing utility facilities in the Valley must be upgraded, relocated and/or removed, or abandoned in place. Development of a utilities improvement plan is needed to provide long-term guidance to utility infrastructure improvements. This plan will also ensure that the utility system developed maximizes the efficiency of utility operations and minimizes adverse impacts on the park's natural and cultural resources. Where possible, various utilities would be consolidated into integrated corridors to ensure adequate service to existing and proposed facilities. The integration of utilities into fewer corridors would reduce existing operation and maintenance impacts on park resources. This would be achieved by removing some utility infrastructure from the Merced River riverbed and floodplain and relocating some utilities out of environmentally sensitive areas, thus allowing for the proposed ecological restoration of those areas identified in the *Yosemite Valley Plan*. The East Yosemite Valley Utilities Improvement Plan was developed to achieve these goals. This park conducted public scoping on this project, then called the Yosemite Valley Integrated Utility Master Plan, in January 2003. The project name has been changed to more accurately reflect the scope of the project, which looks at major utility improvements in the east Valley, from the Yosemite Creek Lift Station to the park water storage tank near Happy Isles.

The East Yosemite Valley Utilities Improvement Plan identifies potential utility corridors that would (1) allow for efficient consolidation of utilities, (2) maximize use of existing and proposed transportation corridors, and (3) minimize use of environmentally sensitive areas. The specific

utilities addressed in the East Yosemite Valley Utilities Improvement Plan include wastewater, water, electric, and, to a limited extent, communications facility improvements located in the east Valley.

The *East Yosemite Valley Utilities Improvement Plan Environmental Assessment* was released for public comment in July 2003. This document contains a summary of substantive public concerns for the *East Yosemite Valley Utilities Improvement Plan Environmental Assessment*, and the National Park Service responses to those concerns.

COMMENT ANALYSIS PROCESS

The letters, emails, and faxes represented in this report were analyzed using the National Park Service's adaptation of a process developed by the United States Department of Agriculture, Forest Service, Washington Office Ecosystem Management Staff, Content Analysis Team. This process has been used over the last seven years for public comment on Yosemite National Park planning efforts including the 1992 Draft Yosemite Valley Housing Plan, the 1996 Addendum to the Draft Yosemite Valley Housing Plan, the 1997 Draft Yosemite Lodge Concept Plan, the *Valley Implementation Plan*, the 2000 *Merced Wild and Scenic River Comprehensive Management Plan*, and the 2000 *Yosemite Valley Plan*.

The comment analysis process includes three main components: a coding structure, a comment database, and a narrative summary. Initially, a coding structure is developed to help sort comments into logical groups by topics. Code categories are derived from an analysis of the range of topics covered in relevant present and past planning documents, National Park Service legal guidance, and letters themselves. The object of these codes is to allow for quick access to comments on specific topics. The coding structure used was inclusive rather than restrictive—an attempt was made to capture all comments.

The second phase of the analysis involves the assignment of codes to statements made by the public in its letters, faxes, and emails. For each comment in a piece of correspondence, codes are assigned by one staff person, validated by another, and then entered into a database as verbatim quotes from actual public statements. The database, in turn, is used to help construct this narrative summary.

The third phase includes the identification of statements of public concern and the preparation of a summary report. Statements of public concern are identified throughout the coding and writing process and are derived from and supported by quotes from original letters. These public concerns attempt to present common themes identified from comments in a statement that captures the action the public feels the National Park Service should undertake. Public concerns are derived directly from letters and through a review of the database. Each is worded to give decision makers a clear sense of the public's concerns. Statements of concern are not intended to replace actual comments or sample statements. Rather they can help guide the reader to comments relating to the specific topic in which they are interested. All identified public concerns, whether in or out of scope, or supported by the comments of one person or many, are included.

The fourth phase of analysis is careful reading of each public concern statement and its supporting quotes to determine if the concern is within or out of the scope of the project, and whether substantive or nonsubstantive. In accordance with the National Park Service's NEPA guidance (Director's Order #12) and based on the Council of Environmental Quality regulations, a substantive comment is one that:

- Questions, with reasonable basis, the accuracy of the information in the environmental analysis;
- Questions, with reasonable basis, the adequacy of environmental analysis;

- Presents reasonable alternatives other than those presented in the environmental analysis;
- Causes changes or revisions in the proposal.

Nonsubstantive comments include those that simply state a position in favor or against the proposed alternative, merely agree or disagree with National Park Service policy, or otherwise express an unsupported personal preference or opinion. Although a commentator's personal opinions on a subject may influence the development of the final plan, they generally would not affect the impact analysis.

Based on this analysis, National Park Service responses are developed for each public concern. These responses, the concerns and supporting quotes, along with an appropriate introduction, form the final Public Comment and Response Report (available upon request).

The *East Yosemite Valley Utilities Improvement Plan Environmental Assessment*, Errata Sheets: Part 2, contains those concerns that were screened as being substantive, along with supporting quotes and the National Park Service responses. Emphasis in this process is on the content of the comment rather than the number of people who agree with it. This is not a vote-counting process and no effort has been made to tabulate the number of people for or against a certain aspect of a specific planning topic. This information can be derived manually from the database, if desired.

Although the comment analysis process used attempts to capture the full range of substantive public concerns, this summary should be used with caution. Comments from people who chose to respond do not necessarily represent the sentiments of the entire public. All substantive comments are treated equally and are not weighted by number, organizational affiliation, or other status of respondents.

For more information, the reader should refer to the database reports prepared as part of this process and the original letters available in the Planning and Compliance Office, Yosemite National Park; PO Box 577; Yosemite National Park, California 95389.

HOW TO USE THIS DOCUMENT

This comment analysis summary is divided into sections. The first section includes general comments on the planning process and National Park Service policies. The next section covers comments on the East Yosemite Valley Utilities Improvement Plan alternatives. The next section addresses comments regarding natural resources, including water, vegetation, wetlands, rare and threatened species, and air quality. The next section addresses park social resources, including visitor experience, access, transportation, and park operations.

Each section includes one or more statements of public concern. These public concerns attempt to present common themes identified from comments in a statement that captures what action the public feels the National Park Service should undertake. Each public concern is, in turn, followed by supporting quotes from public comments referenced to original letters.

Each supporting quote is followed by an attribute which identifies the number assigned to the original letter it came from, whether the comment was made by an individual or an organization, a general description of the organization type, and a reference to the letter number and the comment number within the letter. This information appears as a parenthetical clause in the following format: organization or individual, city and state of letter – relevant planning effort – letter number. For example, “(Individual, Merced, CA - #7-3)” is a letter from an individual in Merced, California, and assigned the letter number 7; the supporting quote is from the third coded comment in the letter.

Finally, each public concern statement, and its supporting quote, is followed by the National Park Service Response. Note that minor technical comments are corrected in the appropriate document or errata sheet and do not receive either a public concern statement or National Park Service response in this report.

PUBLIC COMMENTS AND RESPONSES

The environmental assessment was available for public review and comment from July 18, 2003 through September 2, 2003. The comments received were screened to determine whether any new issues, reasonable alternatives, potential for significant impacts, or mitigation measures were suggested. The comments received did not identify new issues, alternatives, or mitigation measures, nor did they correct or add substantially to the facts presented in or increase the level of impact described in the environmental assessment. Comments in favor of or against the proposed action or alternatives, or comments that only agree or disagree with National Park Service policy, are not considered substantive (i.e., they did not challenge the accuracy of the analysis, dispute information accuracy, suggest different viable alternatives, and/or provide new information that makes a change in the proposal). Several comments, although not substantive, did result in changes to the environmental assessment as shown in the *East Yosemite Valley Utilities Improvement Plan Environmental Assessment*, Errata Sheet: Part 1. No modifications to the Preferred Alternative were made as a result of comments.

PLANNING PROCESS AND POLICY

32. **Public Concern: The National Park Service should delay consideration of the East Yosemite Valley Utilities Improvement Plan Environmental Assessment until after the court decision on the appeal of the Merced Wild and Scenic River Plan.**

“The National Park Service should await the outcome of the appeal of the decision in the case over the Merced River Plan for the court's determination as to whether a determination of user capacity is required under the law.”
(Individual, San Francisco, CA, Comment #17-4)

Response: Since the issuance of the *East Yosemite Valley Utilities Improvement Plan Environmental Assessment*, the Ninth Circuit U.S. Court of Appeals issued its decision in the Merced River Plan case. The Court found that the Merced River Plan contained adequate data and that the National Park Service worked cooperatively with the California Regional Water Quality Control Board to remedy wastewater system failures. The Court also found that the river corridor boundary in El Portal was not protective of Outstandingly Remarkable Values and that the Merced River Plan did not provide for the prompt implementation of measurable limits to address user capacity. However, the Court found that the Visitor Experience and Resource Protection (VERP) framework was an acceptable method to address user capacity, and ordered the National Park Service to either implement VERP indicators and standards immediately or develop interim measures. The Court did not prevent the National Park Service from conducting actions in the river corridor in the meantime.

As explained in the *East Yosemite Valley Utilities Improvement Plan Environmental Assessment* and this Summary of Public Comment and Response, this project will not lead to an increase in the number of users in the river corridor. The utility improvements identified in the East Yosemite Valley Utilities Improvement Plan are designed based on the level of facilities and visitor use identified in the *Yosemite Valley Plan*, which reduces visitor and employee accommodations in the Valley. In designing the utility system improvements, total visitor use, including overnight and day use visitors was assumed to be 18,241, as identified by the General Management Plan and the *Yosemite Valley Plan*. Because this project will not cause an increase in visitor use of the Valley, the National Park Service does not believe that this project needs to be delayed.

This project will also enable the National Park Service to address wastewater system repairs to conform to the Cleanup and Abatement Order issued by the California Regional Water Quality

Control Board. It would be irresponsible for the National Park Service to delay implementation of these needed repairs. The East Yosemite Valley Utilities Improvement Plan will enable the National Park Service to complete these repairs in an efficient manner by removing or abandoning scattered utility infrastructure and creating consolidated corridors to serve existing and proposed facilities.

34. Public Concern: The National Park Service should provide public access to all East Yosemite Valley Utilities Improvement Plan Environmental Assessment supporting documents.

“You [the park Superintendent], or those in your employ have refused to allow the documents and plans for this system to be copied and distributed to the public citing national security. Those in charge of the project are in fact keeping this information from the public in violation of the FOYA. Since when, does the plans, for a sewer system in a National Park affect national security? This is simply a ploy to keep these projects from public scrutiny. Such actions are patently illegal. That this has not been done is a violation of NEPA, as far as I can tell. It is also a violation of the public's right to know how its money is being spent.” (Individual, Harbor City, CA, Comment #16-2)

Response: This concern questions the park's compliance with NEPA in regard to disclosure of technical utilities-related information. The CEQ provides guidance on NEPA implementation in a document called 40 Most Asked Questions. This document states that an environmental assessment "should not contain long descriptions or detailed data which the agency may have gathered. Rather, it should contain a brief discussion of the need for the proposal, alternatives to the proposal, the environmental impacts of the proposed action and alternatives, and a list of agencies and persons consulted."

The environmental assessment provides sufficient detailed information on the proposed action for an evaluation of the environmental effects of the project. The environmental assessment describes the types of utilities in each corridor, other utility infrastructure proposed (lift stations and transformers), locations of utility corridors, corridor widths, and construction activities. The detailed technical documents that support the information provided in the environmental assessment were made available for review upon request.

35. Public Concern: The National Park Service should prepare an Environmental Impact Statement for the East Yosemite Valley Utilities Improvement Plan.

“I was first confused by the fact that I was reading an environmental assessment that discloses several major adverse impacts.... I was always under the impression that NEPA requires preparation of an environmental impact statement for any action that would have major adverse impacts. I know that the one instance when an environmental assessment can state major impacts is if those effects have been previously disclosed in an environmental impact statement (i.e., a tiered document). Although the purpose and need for this action states that the need for this plan was identified during development of the Yosemite Valley Plan, this action does not appear to be included in the Yosemite Valley Plan ...for which an environmental impact statement has been prepared. Even though in many instances mitigation is provided that would reduce the magnitude of the impacts, NEPA would still require preparation of an environmental impact statement and not an environmental assessment.” (Individual, San Francisco, CA, Comment #5-1)

“The Environmental Assessment (EA) of the east Yosemite Valley Utilities Plan ... describes a massive years long construction project in Yosemite Valley. A project of this size will have significant major impacts to the Valleys natural resources for years to come. Such a massive undertaking ... must include significant public involvement, input and review during the planning process as

allowed for in an Environmental Impact Statement EIS. A decision document expected this fall should set aside this EA and initiate a full EIS process involving public involvement throughout the planning period. During an EIS review, design capacity, a major question and issue needs to be addressed to prevent unlimited future public accommodations in Yosemite Valley.” (Individual, El Dorado Hills, CA, Comment #8-1)

“Owing to the inadequacy of the EA, to the fact that much information which is necessary to properly evaluate the proposal, and to the lack of disclosures required under NEPA, I request that a full EIS be completed for this proposed project. There is no question whatever that the scope of the project is significant, therefore a full EIS should be done. Merely issuing a FONSI would constitute a grievous insult to the public interest.” (Individual, Comment #9-1)

Response: NEPA requires federal agencies to review any proposed major actions, to evaluate the environmental effects of those actions, and to take these effects into consideration during decision making. NEPA requires an Environmental Impact Statement be prepared if an agency finds that a proposed action would have significant environmental effects. NEPA does not define what a “significant environmental effect” is, but does note that assessment of effects should take into account the context, duration, and intensity of an effect.

As described in Chapter 4 of the East Yosemite Valley Utilities Improvement Plan, the National Park Service evaluates the significance of environmental effects by considering the context, duration, and intensity of effects. Thus, the intensity of an effect (minor, moderate, major) is not the only fact used in determining whether an impact is significant and not all major impacts are considered significant. Other factors taken into consideration are the scarcity of the resource being affected, its sensitivity to disturbance, its resilience, and other factors. The National Park Service also considers the potential for mitigation to reduce the effects. Short-term construction-related effects that are considered to be major, such as construction noise effects, are typically not considered to be significant effects by the National Park Service due to their temporary nature.

Based on the analysis of environmental effects documented in the environmental assessment, the National Park Service has found that there is no significant impact. Short-term adverse effects have been mitigated to the extent possible. Long-term effects are either beneficial, or where adverse, have been mitigated to minor or moderate levels.

NEPA does not require an Environmental Impact Statement based upon the size or dollar value of an action.

36. Public Concern: The National Park Service should provide adequate disclosure of information on this project as required by NEPA.

“At an Open House at the Yosemite Village East Auditorium on July 30th, 2003 I was told ... to contact [the] Utilities Project Manager...to obtain copies of two documents listed in the Bibliography of the EA. After I contacted him, ...[he said] that I would need to request the documents through the Superintendent's office, which I subsequently did by e-mail on August 5th. No response to the request was received, however. My conversations with a representative of the Yosemite Environmental Office at the Open House also revealed a lack of information about existing utilities in the EA after he volunteered to produce "his copy" of the EA and together we found little of what I asked him about in it. In fact, there was not even a single copy of the EA on hand at the Open House. Other members of the public-at-large who might have attended might have been led to believe that the only information the Park Service had produced on this proposal was the one placard on display at a table. Considering the size of the project, this is a violation of the public trust.” (Individual, Comment #9-2)

“While we appreciate the efforts you have made to respond to our questions at the Open Houses, the fact remains that this information [about Yosemite Valley

carrying capacity relative to current, project, and system design capacity, where road widening would occur, alternative fuel supplies for sewer pumps, and why night operations might be necessary, and if used, what effect they would have on wildlife] should be readily available to the general public through an open NEPA process. Its availability should not be limited to those who have the time, energy, and knowledge to ferret it out. We think the law requires the former approach, not the latter.” (Conservation Organization, Comment #15-8)

Response: NEPA requires that an environmental assessment provide sufficient information on a project to allow for an evaluation of the environmental effects of a project. NEPA does not require technical engineering information or detailed cost information be provided in an environmental assessment, though detailed supporting technical materials and additional review time were made available upon request. In fact, the CEQ in its 40 Most Asked Questions document states that an environmental assessment “should not contain long descriptions or detailed data which the agency may have gathered. Rather, it should contain a brief discussion of the need for the proposal, alternatives to the proposal, and a list of agencies and persons consulted.” The *East Yosemite Valley Utilities Improvement Plan Environmental Assessment* provides sufficiently detailed information on the project to allow for evaluation of the environmental effects of the project.

65. Public Concern: The East Yosemite Valley Utilities Improvement Plan Environmental Assessment should have had full disclosure of the details of mitigation measure development and implementation.

“I was also disheartened to find that so many of the mitigation measures said that a plan would be prepared at some later date but failed to state who would develop the plan, when it would be developed, who would review it, who would implement it, and what would happen if it didn’t work (any repercussions)”.

(Individual, San Francisco, CA, Comment #5-3)

Response: NEPA does not require that mitigation measures that call for plans be fully prepared and included as part of an environmental assessment. There must be sufficient information on the mitigation measure to allow for a review of its potential to address environmental effects. The mitigation measures included in the environmental assessment sufficiently address the elements or goals of the measures to allow for an evaluation of their effectiveness. Many of the mitigation measures cannot be developed in detail until design details for the project are complete. The Finding of No Significant Impact (FONSI) includes some additional information on mitigation measures, including responsible parties and timing for each measure.

37. Public Concern: The National Park Service should prepare an Environmental Impact Report (EIR) on this project.

“A full EIR is required for the East Valley Utilities Improvement Plan.”

(Individual, Merced, CA, Comment #18-7)

Response: As a federal agency, the National Park Service is not required to prepare an Environmental Impact Report (EIR) on park projects. EIRs are documents prepared pursuant to the California Environmental Quality Act (CEQA), which applies only to state and local agencies in California. (Please also see the response to Public Concern 35 regarding requirements for Environmental Impact Statements under NEPA.)

38. Public Concern: The National Park Service should stop work on this project until full compliance with NEPA is assured.

“I am protesting the development of a sewer system in Yosemite Valley that is being built without adequate review and without consideration for preserving the conditions necessary for a healthy environment in the valley. ... I am requesting that you stop all work on the project until full compliance with the National

Environmental Policy Act is assured. The complete project is unnecessary and will cost far more than a much more modest and effective project would cost.” (Individual, Paso Robles, CA, Comment #20-1)

Response: The *East Yosemite Valley Utilities Improvement Plan Environmental Assessment* has been developed in compliance with NEPA and applicable park policies. The environmental assessment provides information on the project, alternatives, and environmental effects for each alternative. Adoption of the FONSI by the National Park Service finalizes the park compliance with NEPA. The East Yosemite Valley Utilities Improvement Plan will not be implemented prior to a FONSI being adopted.

67. Public Concern: The East Yosemite Valley Utilities Improvement Plan Environmental Assessment should have covered more adequately the effects of construction of new, and removal of old, utilities infrastructure.

“The width of one road's pavement is shown as 24', wider than the existing pavement, ... Nor is consideration of the number of trees removed to accommodate such widening, including the shoulders, and the resulting impacts included in the report.” (Individual, Merced, CA, Comment #18-3)

“Pipe bursting, the technique advertised to have a minimal effect on areas to be restored such as the meadows by breaking up sewer pipes in situ, will still require “excavation of manholes at entrance and exit (10x10x10) and possibly intermediate areas due to pipe condition.” (Individual, Comment #19-10)

“The most advertised selling point of Alternative 2, then, that of meadow restoration, even itself comes at a price. And most of those impacts, including the extra approximately \$66 million it will cost to relocate the rest of the utilities infrastructure and the excavation of significant new areas of the Valley in order to install new forcemains, are not discussed at all or not discussed adequately in the Utilities EA.” (Individual, Comment 19-11)

Response: The *East Yosemite Valley Utilities Improvement Plan Environmental Assessment* adequately describes the effects of construction of the new utility corridors and removal of existing utilities in meadow areas. The tables in Chapter IV specifically break out the effects from construction of new utility corridors and repairs to existing utilities, as well as the effects from removal of utilities.

50. Public Concern: The East Yosemite Valley Utilities Improvement Plan should not disturb the River Protection Overlay or Outstandingly Remarkable Values in the Merced Wild and Scenic River Corridor.

“It is inappropriate to bulldoze and further disturb the river zone along Southside Dr. and other areas in Yosemite Valley.” (Conservation Organization, Comment #12-6)

“[D]oesn't the Wild and Scenic Rivers Act and your River Protection Overlay state that existing facilities can be replaced or relocated only when they do not directly or adversely affect your Outstandingly Remarkable Values?” (Individual, San Francisco, CA, Comment #5-10)

Response: The *East Yosemite Valley Utilities Improvement Plan Environmental Assessment* (pages V-1 through V-3) addresses the conformance of the project with the Merced River Plan. The proposed project is in compliance with the Merced River Plan classifications, the river protection overlay, and the management zoning categories. The selected alternative reduces the number of utility crossings in the Merced River, allows for removal of utilities in areas identified for ecological restoration along the river, and implementation is expected to allow the National Park Service to protect and enhance the river's Outstandingly Remarkable Values.

51. Public Concern: The East Yosemite Valley Utilities Improvement Plan Environmental Assessment should have fully disclosed the direct and cumulative effects of the project on the Merced Wild and Scenic River and its Outstandingly Remarkable Values.

“There is no adequate discussion of how this increase [support facilities supplied by the utilities upgrade] would affect...the Merced Wild and Scenic River Zone, and would cause new and cumulative impacts to the Merced River Wild and Scenic River outstandingly remarkable values and corridor.” (Conservation Organization, Comment #12-4)

Response: The *East Yosemite Valley Utilities Improvement Plan Environmental Assessment* (pages V-1 through V-3) addresses the conformance of the project with the Merced River Plan. The selected alternative is in compliance with the Merced River Plan river classifications, the river protection overlay, and the management zoning categories. The selected alternative reduces the number of utility crossings in the Merced River, allows for removal of utilities in areas identified for ecological restoration along the river, and implementation is expected to allow the National Park Service to protect and enhance the river’s Outstandingly Remarkable Values.

64. Public Concern: Yosemite National Park should address renewable resources, cleaner fuels, and conservation in its utility planning.

“Utility infrastructure should be planned that will use renewable sources of energy wherever possible.” (Individual, San Francisco, CA, Comment #17-6)

“...the proposal would use diesel engines for back-up power at the sewer lift stations. Apparently these would be fired up at least weekly to ensure availability in case of need. And, in the event of power outage, the standby generators could run for prolonged periods. Apparently the EA did not discuss alternative fueled power sources. Given the known hazards of diesel fueled engines, why was there no discussion of alternatives? Propane seems like an obvious possibility; ...” (Conservation Organization, #15-6)

“Where is a discussion of alternate energy sources and conservation of energy..” (Conservation Organization, Comment #12-16)

“Photovoltaic power is also the best form of power with which to provide electricity for transportation infrastructure. ...Utility infrastructure should be planned that will use renewable sources of energy wherever possible as well as provide flexibility in both power generation and the location of the utilities themselves in case of the above. ...For the Valley's future, planning must be farsighted and conservation oriented, ...” (Individual, Comment #19-19)

Response: Conservation measures were considered in development of the East Yosemite Valley Utilities Improvement Plan, and specifically, propane backup generators were considered. The propane generator technology is currently not sufficient to support the size generators required by this project. The park will require the diesel generators to have the best available emissions reduction technology. The use of photovoltaic cells to provide backup power is not technically feasible at this time due to the power requirements of the wastewater system. In addition, the size and appearance of solar panel arrays that would be required would adversely affect the park's scenic resources and cultural landscape. Finally, gravity sewers will continue to be used to the extent technically possible throughout the Valley.

ALTERNATIVES

8. Public Concern: The East Yosemite Valley Utilities Improvement Plan Environmental Assessment should have better described the scope and breadth of Alternative 2.

“Virtually the only information contained in the two documents from the bibliography below that I could find in the Utilities EA consists of Appendix D....

This is merely a list of 42 rehab projects, nineteen (19) of which involve "capacity increase." I am not aware and it is unclear at present how many of these projects are underway, are already completed or whether these are the projects referred to in the Utilities EA where it describes on p. II-30 under the column titled Alternative 2 "plus \$10 million for wastewater repairs required." The material in Appendix D by no means describes the scope and breadth of the proposals in Alternative 2. The Utilities EA should properly have included more of what is covered in the two documents below listed in its bibliography. [Kennedy/Jenks Consultants 2002, 2003.] Providing details of this sort to the lay public is essential if there is to be any hope that people will understand the impacts of a project of this size and considerable significance. The Utilities EA is deficient in doing so and, as a result, fails to make the minimally adequate disclosures required under NEPA." (Individual, Comment #19-1)

Response: The Council on Environmental Quality provides guidance on this issue in its 40 Most Asked Questions document and states that an environmental assessment "should not contain long descriptions or detailed data which the agency may have gathered. Rather, it should contain a brief discussion of the need for the proposal, alternatives to the proposal, the environmental impacts of the proposed action and alternatives, and a list of agencies and persons consulted." The East Yosemite Valley Utilities Improvement Plan provided sufficient information on the project to allow for a review of the potential environmental effects. Construction of utility corridors and other utility facilities (transformers, lift stations) are sufficiently described in the environmental assessment both in the text descriptions in Chapter II, the summary in Table 2-1, and the figures in Chapter II (Figures II-1 through II-30). The detailed engineering information in background technical reports is not required to provide an understanding of the scope and breadth of the project, which is adequately described in the sections cited above.

11. Public Concern: The East Yosemite Valley Utilities Improvement Plan Environmental Assessment should have clarified whether the Mitigation Measures Common to all Action Alternatives also would be applied to the No Action Alternative.

"Another concern was that mitigation appears to be applied to Alternative 1, the No Action Alternative. Although Alternative 1 could have described the type of actions you are now implementing to protect resources and that you would continue to implement during repair and maintenance activities, the project description for this alternative is mute on this point. Rather, the analysis for Alternative 1 seems to state that the Mitigation Measures Common to All Action Alternatives would be applied to Alternative 1 (No Action) as well. [refer to the analysis for Alternative 1 and Table II-2, e.g., impacts to soils, impacts on special status species]". (Individual, San Francisco, CA, Comment #5-2)

Response: The Errata Sheet clarifies that the mitigation measures do apply to Alternative 1 by changing the heading on Page II-20 to "Mitigation Measures Common to All Alternatives."

Alternative 1 consists of continuing current park management practices, rather than removing facilities from areas identified for ecological restoration and rerouting facilities to provide service to facilities proposed in the YVP. Continuing current park management practices would include repairs to existing wastewater facilities required under the Cleanup and Abatement Order from the California Regional Water Quality Control Board. A No Action Alternative that does not include these repairs would not be reasonable. Since actions associated with Alternative 1 do include construction activity, mitigation measures will be implemented to reduce the effects of this alternative.

17. Public Concern: The East Yosemite Valley Utilities Improvement Plan Environmental Assessment should have described a true "No Action" alternative without the \$10 million sewer rehabilitation.

“The "No Action Alternative" (Alt. 1) is misleading. In fact, it would involve doing a \$10 million rehabilitation of the Yosemite Valley sanitary sewer system.” (Individual, San Francisco, CA, Comment #17-5)

Response: The No Action Alternative reflects continuation of existing park management policies, including the continued use, maintenance, and repair of Yosemite Valley wastewater systems. This alternative includes repairs of the wastewater system required under the Cleanup and Abatement Order issued by the California Regional Water Quality Control Board. The No Action Alternative is intended to be a reasonable alternative. It is not reasonable to assume that the park would continue to operate the utility systems and not complete the wastewater system repairs required by the Cleanup and Abatement Order.

20. Public Concern: The National Park Service should not implement Alternative 2 as it is described in the East Yosemite Valley Utilities Improvement Plan Environmental Assessment.

“Although I would love to see utilities consolidated as described in Alternative 2, I cannot in good conscience recommend this action if it is to be implemented as stated in this flawed document.” (Individual, San Francisco, CA, Comment #5-9)

Response: The *East Yosemite Valley Utilities Improvement Plan Environmental Assessment* adequately described the environmental consequences of the selected alternative and the mitigation measures incorporated into the project to minimize impacts to cultural and natural resources. The selected alternative best meets the purpose and need for the project while protecting park resources and visitor experiences.

22. Public Concern: The East Yosemite Valley Utilities Improvement Plan should propose a different route for the water and communication utility corridor between the Ahwahnee Hotel and the Rivers Campgrounds.

“..the proposed water and communication utility corridor between the Ahwahnee Hotel and the Rivers Campgrounds should be located elsewhere. The NPS (Resources Mgmt) has gone to great length to remove other utilities (electric for one) and facilities (portion of Lower Pines CG) out of that same corridor due to sensitive resource values. Why place these utilities in a corridor that will be difficult to access and maintain. If a loop system is needed for water to the Ahwahnee, bite the bullet and make a bigger loop that avoids this river crossing and other important habitat.” (Individual, Comment #13-1)

Response: This concern calls for the modification of the selected alternative in the environmental assessment. The proposed water corridor is designed to provide a looped water system to The Ahwahnee Hotel. The proposed corridor follows an existing utility corridor and a proposed paved path which would provide access to the utilities. Alternative routes to access The Ahwahnee would require crossings of the Merced River and Tenaya Creek in areas that are subject to continuing stream bed and bank erosion, that would require a longer corridor that would cross through a very sensitive cultural resource area, and would result in leaving a utility corridor in North Pines, which is currently identified for ecological restoration in the *Yosemite Valley Plan*. Therefore, park management has determined that the alternative will not be modified in this area.

23. Public Concern: The East Yosemite Valley Utilities Improvement Plan Environmental Assessment should have considered alternatives examining different numbers of pumps required to force sewage through segments of lines in Alternatives 2 and 3.

“The increased number of pumps required to force sewage through segments of the lines in Alternative 2 (and 3) does not include ... consideration of alternatives.” (Individual, Merced, CA, Comment #18-5)

“Based on examination of supporting documents to the environmental assessment package, TIE recommends [that]...seeming replacement of the extant gravity-facilitated system with lift stations opens questions as to emergency power. There is substantial risk of increased emissions with use of traditional diesel generators.” (Non-Governmental Organization, Merced, CA, Comment #21-2)

Response: The existing wastewater collection and transportation system was designed to primarily use gravity to move wastewater through the east Valley to the Yosemite Creek Lift Station. In order to remove the existing wastewater collection and transport lines from meadow areas identified for ecological restoration, the park will need to use wastewater forcemains to reroute wastewater flows along transportation routes where the grade is such that gravity flows are not feasible. Pump requirements were developed based on engineering standards for the wastewater loads, existing grades, and system reliability and efficiency. Gravity mains will continue to be used to the extent technically feasible within the Valley.

24. Public Concern: The East Yosemite Valley Utility Improvement Plan Environmental Assessment should have included a breakdown of the estimated costs of the individual utilities--water, sewer, power and communications.

“...the cost estimates on p. II-30 of the Utilities EA ... says "\$53.9 million for East Yosemite Valley Utilities Improvements, plus \$10 million for wastewater repairs required; \$11.9 million for utility removals and abandonment; continued ongoing utility maintenance and repair costs." A breakdown of the estimated costs of the individual utilities - water, sewer system, power and communications - is not contained in the Utilities EA and was removed from the copy of the Integrated Utility Master Plan that I examined in the Research Library.” (Individual, Comment #19-13)

Response: This concern questions the accuracy and sufficiency of the cost information provided in the environmental assessment. The cost information provided in the environmental assessment is sufficient to evaluate the socioeconomic effects of the project. More detailed cost information is being withheld to ensure a fair bidding process for construction of the project.

25. Public Concern: The National Park Service should slow down the rapid pace at which the East Yosemite Valley Utilities Improvement Plan is being implemented.

“Contracts that are let for construction should recognize that the [pending] Ninth Circuit ruling [on the Merced Wild and Scenic River Comprehensive Management Plan] could change everything. Preferably, the extremely rapid pace at which [the East Yosemite Valley Utilities Improvement Plan is]...being pressed should be slowed down. It would increase the likelihood that the projects would actually benefit the visitor experience and protection of the natural resources, and at less cost to the taxpayer.” (Conservation Organization, Comment #15-4)

Response: Refer to Response #32 for a discussion of the impact of the Ninth Circuit U.S. Court of Appeals’ ruling on this Plan. The National Park Service must address wastewater system repairs to conform with a Cleanup and Abatement Order from the California Regional Water Quality Control Board. It would be irresponsible of the National Park Service to delay implementation of these needed repairs. The East Yosemite Valley Utilities Improvement Plan will enable the National Park Service to complete these repairs in an efficient manner by removing or abandoning scattered utility infrastructure and creating consolidated corridors to serve existing and proposed facilities.

26. Public Concern: The East Yosemite Valley Utilities Improvement Plan Environmental Assessment should have provided a justification for the expenditure of \$53.9 million for the preferred alternative.

“It...appears that you are willing to spend \$53.9 million for this project when the actual needs could be met for \$11.9 million. How can you justify to the public this expenditure of funds when they are not needed?” (Individual, Harbor City, CA, Comment #16-7)

Response: The East Yosemite Valley Utilities Improvement Plan removes utilities from areas identified in the *Yosemite Valley Plan* for ecological restoration and provides utility service to areas identified for development or redevelopment in the *Yosemite Valley Plan*, as well as completing required wastewater system upgrades to address condition and capacity problems with the existing wastewater system. The No Action Alternative, with a projected cost of \$11.9 million, includes only the required repairs to existing wastewater systems. It does not meet the purpose and need for the project or support the implementation of the *Yosemite Valley Plan*. This issue is addressed sufficiently in the *East Yosemite Valley Utilities Improvement Plan Environmental Assessment*.

27. Public Concern: The National Park Service should consider a New Alternative that would allow the Two Rivers Campgrounds to have access to all the Utilities as well as the lower section of the Lower Pines Campground.

“The following comments and attached map will show the Councils design for the Main truck line for all 4 utilities in Alternative 2 and 3. This design will allow the Two Rivers Campground to have access to all the utilities as well as the lower section of Lower Pines Campground. Activation of these Campgrounds will meet the needs of the public for more campsites in Yosemite Valley and the V.E.R.P. directives for Park Service Goals.”

The following comments are numbered to coincide with the attached map:

- 1.) The proposed lift station is shown at this location (near Housekeeping Camp) in the proposed construction phase.(Alternative 2&3) .
- 2.) The Councils design for the utilities is to pump the wastewater East to Stoneman Bridge.
- 3.) After joining the main line, it would continue to be pumped down Northside Drive to the next lift pump station at the Tecoya Dorms. This same route will be used for Communications, Electric, and Water utilities. .
- 4.) This section will show the elimination of the 4 utility lines between Housekeeping Camp and Camp 6 via the South Side Drive (Alternative 2) and the utilities lines via South side Drive to Sentinel Bridge to North side Drive (Alternative 3) thus eliminating the major disturbance to virgin soil, riparian zones, native plant gathering habitats and cultural resource and archaeological sites. This is the type of disturbance that the council feels is unnecessary and avoidable. By routing all of the utilities from within the Housekeeping Camp area through Northside Drive corridor, it makes utilities available for Upper and Lower Pines Campgrounds making them fully functional when placed back as camp sites to meet the public requirements for campsites in Yosemite Valley. .
- 5.) The utility corridor will follow the Resident 1 (Old Superintendent House) driveway to a location below the Residence where the existing utilities cross the river thus avoiding any impact upon the old growth and stands of healthy Black Oaks and the gathering sites for many other resources in the surrounding ecosystem.
- 6.) The preferred alternative for the East Valley utilities is to minimize ground disturbance and to follow existing roadway south of the Upper Pines Campground to the Happy Isles area along the existing water line route through Curry Village. With the absence of camping facilities at Indian Caves and Group Camp the need for a proposed pump station is eliminated.” (Tribal Organization, Mariposa, CA, Comment #7-2)

Response: This alternative would not be consistent with the *Yosemite Valley Plan*, which calls for removal of the Rivers campgrounds, removal of utilities from these areas, and the ecological restoration of these areas. This issue was decided by the approved *Yosemite Valley Plan* after considerable public involvement and management deliberation. Reanalysis of the appropriate level and location of campground facilities is beyond the scope of this document.

WATER RESOURCES

- 12. Public Concern: The National Park Service should ensure that the proposed upgrades to the wastewater system in Yosemite Valley are designed to prevent releases of sewage that could contaminate the Merced River.**

“...I am very uncomfortable with the proximity to the Merced River of some of the sewage lines as proposed in the preferred alternative. Given that the NPS's track record includes a massive sewage spill into the Merced River during which the NPS failed to notify those who draw their water supply from the river downstream that fecal contamination was moving from the NPS facility toward their drinking water sources, it is especially desirable to structure a system that prevents any possible breach of the sewer lines leading to contamination of the river.” (Individual, Comment #10-4)

Response: All of the alternatives in the *East Yosemite Valley Utilities Improvement Plan Environmental Assessment* include changes to the Valley wastewater system to address the capacity and condition problems which have led in the past to accidental discharges to the Merced River.

VEGETATION, WETLAND AND WILDLIFE RESOURCES

- 4. Public Concern: The National Park Service should route utilities through previously disturbed areas and non-riparian zones.**

“This Utility Improvement Plan will be the most destructive Project in Yosemite since the 1997 High Water Flood and it is the responsibility of all who love Yosemite to minimize the ground disturbance and rethink where the utilities should be placed without disturbing virgin soil and riparian zones.” (Tribal Organization, Mariposa, CA, Comment #7-3)

Response: The East Yosemite Valley Utilities Improvement Plan attempts to minimize effects to riparian areas and to areas that have not been previously disturbed, as well as impacts to wetlands, California Black Oaks, and cultural resources. Over 90 percent of the proposed corridors are in existing or proposed transportation corridors or in existing utility corridors. The few exceptions to this include some utility corridors near Residence One and the Ranger Y that were relocated into adjacent uplands to reduce effects on large California Black Oak trees, a highly valued resource; and the river crossing and Camp 6 corridor which was identified as the most technically feasible area to cross the Merced River, and connect the Curry Village area with the Yosemite Village area, without crossing through meadow areas identified for ecological restoration in the *Yosemite Valley Plan*.

- 44. Public Concern: The East Yosemite Valley Utilities Improvement Plan Environmental Assessment should have disclosed if there would be nighttime construction operations and, if so, what its effect would be.**

A [internal NPS] memo concerning the Utility Master Plan EA, dated April 7, 2003 raises a question as to whether construction will occur at night. A portion of the memo reads, "Discussion of construction period. Nighttime operations may be required; don't know for sure." ... conducting nighttime construction would cause undue stress ... to animals in and around the Valley whose normal

haunts occur mainly during nighttime hours when natural quiet is the norm.” (Individual, Comment #19-9)

“Something else that came out at the Open House was the fact that night time operations might be needed during construction. If such operations were only for technical reasons, such as making connections during a low-flow period, it would be one thing. But, considering the hectic pace at which development is being pushed, we are wondering whether night time operations might be resorted to in order to expedite construction. If this were done, the potential for disturbance of wildlife is very large because of the much longer periods of time involved. Discussion is needed, preferably culminating in a statement that night time operations will not be resorted to except as may be needed for purely technical reasons.” (Conservation Organization, Comment #15-7)

Response: Some construction activities will be required to occur at night, when utility demands are at their lowest. Nighttime construction activities will be limited to those activities technically required to occur at night, primarily activities associated with implementing wastewater system bypasses to allow new lift stations to be connected into the wastewater system. These activities will be minimized by constructing as much of the bypass system as possible during daytime hours and limiting nighttime activities to the minimum required to implement the by-pass and tie in the lift stations. Since there are a limited number of lift stations in each construction phase, these nighttime activities are expected to be minimal.

66. Public Concern: The East Yosemite Valley Utilities Improvement Plan Environmental Assessment should have clarified the relationship between the intensity of impacts to wetlands and the amount of acreage affected.

“After reviewing the analysis I was...confused by the analysis of biological resource impacts. For instance, the wetland analysis states that all alternatives would have short-term minor adverse impacts. However, the Alternative 1 would have short-term impacts on a total of 3.82 acres of wetland while Alternative 2 would impact 26 acres of wetland in the short-term. According to your impact criteria, I would assume that there is a perceptible difference between 3.82 and 26 acres and that the 26 acre impact would be more accurately described as moderate.” (Individual, San Francisco, CA, Comment #5-5)

“After reviewing the analysis I was...confused by the analysis of biological resource impacts. ... Alternative 1 would impact 31 acres of vegetation, while Alternative 2 would affect 99 acres. Again, both impact analyses state that the effects of both actions are minor - even when Alternative 2 would have over three times the effect of Alternative 1.” (Individual, San Francisco, CA, Comment #5-5)

“Alternative 1 would impact 31 acres of wildlife habitat, while Alternative 2 would affect 116 acres. Again, both impact analyses state that the effects of both actions are minor - even when Alternative 2 would have nearly four times the effect of Alternative 1.” (Individual, San Francisco, CA, Comment #5-6)

Response: As discussed on pages IV-7 through IV-12 of the East Yosemite Valley Utilities Improvement Plan, the intensity of impacts to biological resources is not based solely on the acreage affected. Impacts to vegetation (including wetlands) and wildlife also take into account the effects on the abundance, the continuity, and the integrity of the resource populations within the Valley. Thus, whether 5 acres of wetlands are impacted or 25 acres are impacted, if the impact is localized within a relatively small area and does not impact the overall size, continuity, and integrity of wetlands in the Valley, the impact is considered minor. Although Alternative 2 would affect 26 acres of wetlands in the short-term, 20 of these acres would have long-term beneficial effects from the removal of utility infrastructure in these areas. Finally, long-term benefits

associated with removal of the utilities from areas identified for ecological restoration are expected to compensate for the short-term adverse effects from construction.

Similarly, the effects on vegetation and wildlife do not affect critical habitats and are not expected to adversely affect the overall viability of the vegetation or wildlife resource populations within the Valley. And, as discussed above, the long-term benefits associated with removal of the utilities from areas identified for ecological restoration are expected to compensate for the short-term adverse effects from construction. Alternative 1 does not include these types of beneficial effects to offset the adverse impacts resulting from retention and repair of dispersed utility infrastructure in environmentally sensitive areas.

RARE, THREATENED AND ENDANGERED SPECIES

46. **Public Concern: The East Yosemite Valley Utilities Improvement Plan Environmental Assessment should re-evaluate the effects to special status species.**

“... the biological section states that there would be short-term effects to riparian and aquatic habitat but fails to recognize any affect to special status species.” (Individual, San Francisco, CA, Comment #5-11)

“...I’m also leery of the analysis of effects to special status species. Some of the species indicated have relatively short lifespans and what may be a short-term impact on the human scale may have significant effects on multiple generations of a species. I would think that the entire analysis of special status species needs to be rethought.” (Individual, San Francisco, CA, Comment #5-7)

Response: Table C-2 in Appendix C has been revised in the Errata Sheet to reflect the short-term adverse effects to special-status species. The analysis of effects on special status species was prepared by qualified biologists and has been reviewed and concurred with by the USFWS. The information on special status species effects in the environmental assessment is considered to be sufficient.

AIR QUALITY

47. **Public Concern: The National Park Service should not allow the East Yosemite Valley Utilities Improvement Plan to increase air pollution in Yosemite Valley.**

“Widening Valley roads to accommodate bigger buses and motor homes would appear to contravene the Park's Class I airshed status... The Class I airshed status under Federal law allows only a small additional amount of pollution. This is, therefore, unacceptable.....According to the Yosemite Valley Plan, these additional diesel buses will have at least moderately negative effects on levels of nitrogen oxides, or NOx. This understates the truth, which is that many of the diesel buses in question emit illegally high levels of NOx ... The Utilities plan will not solve this problem, it will aid and abet it.” (Individual, Comment #9-5)

“Your plan calls for the use of diesel engines for the pumping stations. However, the valley already exceeds federal air quality standards. How can you justify adding more pollution to the valley air than already exists?” (Individual, Harbor City, CA, Comment #16-6)

Response: This project will not result in widening Valley roads and is not expected to affect transportation modes. As described on page IV-110 of the East Yosemite Valley Utilities Improvement Plan, the project does include additional lift stations with electric pumps. These pumps will require backup diesel generators to ensure continued operation of the system in the event of a power failure. These diesel backup generators will be run for only a short time period each week for testing, and will be required to incorporate the best available emission control technology for diesel generators. The effects to air quality in the region are expected to be negligible.

48. Public Concern: The East Yosemite Valley Utilities Improvement Plan Environmental Assessment should have provided full disclosure of the increased air emissions related to the use of more diesel equipment for construction and operations.

“Another issue of great concern with respect to Alternative 2 is the greater impact upon air quality it will have... Alternative 2, being approximately 6 ½ times larger in terms of costs, will mean that construction activities will be occurring in more areas of the Valley, and that as a consequence more diesel equipment will be operating during the construction phases and bigger diesel generators will be used to power the larger lift stations of the completed sewer system. The completed [sewer] system comprised of a lot more forcemains that at present will likely also have greater power requirements.” (Individual, Comment #19-12)

“The increased number of pumps required to force sewage through segments of the lines in Alternative 2 (and 3) does not include an evaluation of air quality impacts of more diesel engines in Yosemite Valley.” (Individual, Merced, CA, Comment #18-4)

Response: The information provided on air quality effects in the environmental assessment is sufficient. The environmental assessment discusses air emissions from diesel construction equipment and from diesel backup generators at the lift stations. As described on page IV-110 of the East Yosemite Valley Utilities Improvement Plan, the selected alternative does include additional lift stations with electric pumps. These pumps will require backup diesel generators to ensure continued operation of the system in the event of a power failure. These diesel backup generators will be run for only a short time period each week for testing, and will be required to incorporate the best available emission control technology for diesel generators. The effects to air quality in the region are expected to be negligible.

VISITOR EXPERIENCE

10. Public Concern: The National Park Service should complete a visitor carrying capacity study to determine utility capacity requirements.

“Our primary concern all along has been whether the capacities to which the various utilities will be constructed will be appropriate. This determination logically would start from a plan which has defined the level of use which can be sustained without impairing either the visitor experience or the natural resources.

But such a plan does not exist. The 1980 General Management Plan made a start on addressing the concept of carrying capacity, but that effort was nullified by the 2000 Valley Plan.” (Conservation Organization, Comment #11-1)

Response: The East Yosemite Valley Utilities Improvement Plan is designed to remedy existing deficiencies in east Valley utility infrastructure and create consolidated utility corridors to serve existing and planned facilities identified in the *Yosemite Valley Plan*. The proposed utility improvements are designed based on the visitor levels and facilities specified in the *Yosemite Valley Plan*, which reduced visitor and employee accommodations in the Valley. In developing the Utilities Improvement Plan, the engineers assumed a daily visitor use level of 18,241 including overnight and day-use visitors. This is the same daily visitor use level identified in the 1980 General Management Plan.

Most of the proposed improvements address upgrading and modernizing utility equipment and facilities to meet currently accepted engineering standards for safety and reliability. The proposed utility improvements do not increase the overall capacity of the utility systems. For example, the Valley wastewater system is limited by the capacity of the El Portal Wastewater Treatment Plant; this project does not propose to increase this limit. It will, however, address Valley wastewater collection system deficiencies required to be addressed under the Cleanup and Abatement Order issued by the California Regional Water Quality Control Board. Similarly, the

capacity of the drinking water system, which includes the park's three groundwater wells and the water storage tank, will not change. The changes to the water system will address fire flow and other safety standards not currently addressed by the existing water distribution system.

The comment also refers to the 1980 General Management Plan's discussion of a visitor use level of 18,241 for the Valley. The *Yosemite Valley Plan* incorporates this number as the expected level of visitor use in the Valley. Engineering design for the utility systems assumed this level of daily visitor use as the design capacity for the utility systems. In response to the ruling by the Ninth Circuit U.S. Court of Appeals, the National Park Service will also adopt measurable limits on visitor use and proceed with implementing the VERP framework to ensure protection of Outstandingly Remarkable Values for the Merced River.

29. Public Concern: The East Yosemite Valley Utilities Improvement Plan Environmental Assessment should have addressed Yosemite Valley carrying capacity.

"...I asked about the capacities of the utilities and road widths in Yosemite Valley.... [Park staff responded], in general, [by saying] "design capacities were determined by land use allowances in the Yosemite Valley Plan (YVP)." However, the YVP does not contain any numerical values on this. Therefore, there is no basis for the public to make any inferences as to what the intent of the National Park Service is with respect to maintaining existing levels of capacity or increasing the capacities of the utilities and presumably, also the roads in the Valley." (Individual, Comment #19-5)

"It appears that you have ignored the dictates of the Merced River Plan by failing to address user capacity noted in the 1980 master plan." (Individual, Harbor City, CA, Comment #16-5)

Response: As described in Response #10 above, this project is designed to remedy existing deficiencies in east Valley utility infrastructure and create consolidated utility corridors to serve existing and planned facilities identified in the *Yosemite Valley Plan*. The *Yosemite Valley Plan* calls for a reduction in the accommodation of visitors and employees in the Valley. The utility improvements identified in this plan are designed to meet the expected total daily Valley visitor use of 18,241, including both overnight and day-use visitors.

The comment also refers to the 1980 General Management Plan's discussion of a visitor use level of 18,241 for the Valley. The *Yosemite Valley Plan* incorporates this number as the expected level of visitor use in the Valley. In response to the ruling by the Ninth Circuit U.S. Court of Appeals, the National Park Service will also adopt measurable limits on visitor use and proceed with implementing the VERP framework to ensure protection of Outstandingly Remarkable Values for the Merced River.

53. Public Concern: The East Yosemite Valley Utilities Improvement Plan should ensure construction activity is during daytime whenever possible to reduce adverse effects of nighttime construction on visitor experience.

"A [internal NPS] memo concerning the Utility Master Plan EA, dated April 7, 2003 raises a question as to whether construction will occur at night. A portion of the memo reads, "Discussion of construction period. Nighttime operations may be required; don't know for sure." ... conducting nighttime construction would have deleterious effects upon the visitor experience by its negative impacts on air quality and natural quiet." (Individual, Comment #19-8)

Response: Some construction activities will be required to occur at night, when utility demands are at their lowest. Nighttime construction activities would include those activities technically required to occur at night (during low utility usage periods), including activities associated with implementing wastewater system bypasses to allow new lift stations to be connected into the wastewater system. These activities will be minimized by constructing as much of the bypass system as possible during daytime hours and limiting nighttime activities to the minimum

required to implement the by-pass and tie in the lift stations. Since there are a limited number of lift stations in each construction phase, these nighttime activities would be minimal.

61. Public Concern: The EA should address the capacity of the wastewater system.

“..it is clear that the drafters of the Utility Plan EA had something in mind, because there are explicit drawings in the document showing proposed diameters of various sewer lines throughout the project area. Since such detailed plans would have to have originated with some particular capacity level in mind, the question arises as to what that capacity is.

We have gone back and forth through the document repeatedly looking for the capacity information, but have finally concluded that it is not there.”
(Conservation Organization, Comment #11-2)

“The way in which you calculated the proposed [sewer] capacity was explained in terms of the Valley Plan, and what that Plan calls for by way of overnight accommodations. What you did not comment on (we failed to ask the question), was how you took day-use into account. As visitor use continues to shift from overnight to day-use, that becomes more significant. And, as we pointed out in our earlier comments, the Valley Plan does not even address the issue of day-user capacity. (Conservation Organization, Comment #15-3)

1. How many gallons per minute (gpm) can be moved by the present sewer system?
2. How many gpm could be moved by the proposed system?
3. Aside from capacity, what are the actual flows?” (Individual, Harbor City, CA, Comment #16-3)

“Most egregious is the NPS's absolute silence on the most important issue in any proposed alteration and up-grading of utilities infrastructure: how many people is this "improvement plan" designed to serve? Until the NPS includes that information in the documents provided to the public, any public review and comment period is a facade, constructed not for public participation, but for the empty disposal of statutory requirements.

The capacity of the sewer lines is not clearly indicated. Analysis of the needed capacity in terms of visitor numbers and projected usage may indicate an even larger capacity in some parts of the system.” (Individual, Merced, CA, Comment #18-1)

Response: The *East Yosemite Valley Utilities Improvement Plan Environmental Assessment* is intended to ensure adequate utilities for east Valley facilities identified in the *Yosemite Valley Plan*. The utility improvements identified are based on visitor use levels and facilities specified in the *Yosemite Valley Plan*, which calls for a reduction in visitor and employee accommodations in the Valley. The proposed utility improvements, including wastewater improvements, are designed based on an expected level of visitor use in the Valley of 18,241 including both overnight and day use visitors. This is consistent with the level of Valley visitor use identified in the 1980 General Management Plan. The appropriate level of development in the Valley was decided by the approved *Yosemite Valley Plan* after considerable public involvement and management deliberation. Reanalysis of visitor use levels is beyond the scope of this document.

The East Yosemite Valley Utilities Improvement Plan is not intended to increase overall utility capacities, but to address existing utility system deficiencies and to relocate utility systems to reduce environmental impacts and provide utility service to facilities identified in the Yosemite Valley Plan. The capacity of the Valley wastewater system is limited by the permitted capacity of the El Portal Wastewater Treatment Plant (1 mgd), the Yosemite Creek Lift Station forcemain, and the interceptor line that transports wastewater from the Valley to the treatment plant. The capacities of these facilities will remain unchanged. The planning capacity for the collection and

transmission system within the Valley was based on existing flows by wastewater basin and projected changes in flows by wastewater basin associated with changes identified in the *Yosemite Valley Plan*.

ACCESS

2. **Public Concern: The East Yosemite Valley Utilities Improvement Plan should not provide infrastructure for a vast increase in numbers of visitors, visitor facilities, and employee support facilities.**

“It [the East Yosemite Valley Utilities Improvement EA] would provide underlying infrastructure for a vast increase in numbers of visitors, visitor facilities, and employee support facilities. We disagree with this.” (Conservation Organization, Comment #12-2)

Response: The East Yosemite Valley Utilities Improvement Plan does not provide for an increase in the number of visitors, visitor facilities, and employee support facilities. The *East Yosemite Valley Utilities Improvement Plan Environmental Assessment* is intended to ensure adequate utilities for east Valley facilities identified in the *Yosemite Valley Plan*. Utility capacities have been based on services specified in the *Yosemite Valley Plan*, and do not provide for increased visitor capacities above *Yosemite Valley Plan* levels. The *Yosemite Valley Plan* identifies an expected level of visitor use in the Valley of 18,241 including both overnight and day use visitors. The utility systems addressed in the plan were engineered with a design capacity for 18,241 daily visitors. This is consistent with the level of Valley visitor use identified in the 1980 General Management Plan. The appropriate level of development in the Valley was decided by the approved *Yosemite Valley Plan* after considerable public involvement and management deliberation. Reanalysis of visitor use levels is beyond the scope of this document.

TRANSPORTATION

1. **Public Concern: The East Yosemite Valley Utilities Improvement Plan should not widen roads in Yosemite Valley.**

“The Utility plan indicates widening of roads throughout East Yosemite Valley through linkage to trench digging and other construction related to the Utility Plan. The improvement of utilities and the repair of utilities should not be linked to nor used as an excuse to widen roads in Yosemite Valley.” (Conservation Organization, Comment #12-14)

Response: The East Yosemite Valley Utilities Improvement Plan does not propose to widen roads in Yosemite Valley. Roads will be replaced in their existing location and width after utilities are installed below them. This is clarified in the Errata Sheet and the FONSI.

55. **Public Concern: Yosemite National Park should not increase infrastructure to facilitate increasing the bus system for increased tourists.**

“Facilitation of an increasing bus system to accommodate an undisclosed and apparently undetermined amount of tourists enticed into the park through marketing of amenities should not be a basis on which to increase infrastructure including cables.” (Conservation Organization, Comment #12-13)

Response: The *East Yosemite Valley Utilities Improvement Plan Environmental Assessment* is intended to ensure adequate utilities for east Valley facilities identified in the *Yosemite Valley Plan*.

Utility capacities have been based on the facilities and visitor use levels specified in the *Yosemite Valley Plan*, which calls for a reduction of employee and visitor accommodations within the Valley. In designing the utility systems, total visitor use, including overnight and day-use visitors, was assumed to be 18,241, as identified in the Yosemite Valley Plan and the 1980 General Management Plan. Although the upgraded utilities will serve all visitors, including those arriving by bus, the upgraded facilities will not lead to an unlimited number of visitors entering the Valley. As state previously, the utility systems were designed to accommodate a total of 18,241 daily visitors.

The appropriate level of development in the Valley and issues regarding Valley transportation systems were decided by the approved *Yosemite Valley Plan* after considerable public involvement and management deliberation. Reanalysis of these issues is beyond the scope of this document.

56. Public Concern: Yosemite National Park should retain existing road widths in Yosemite Valley.

“Is the widening of South Side Drive...being done to provide a communications utility line that is really needed, or is it being done to eventually accommodate larger motor homes and buses over 40' in length? In recent years the Park Service has been placing boulders at close intervals to prevent vehicles from parking on the shoulder of Valley roads. ... Is there any real need to widen roads such as this one if vehicular traffic is expected to decrease in number under the *Yosemite Valley Plan*? This appears to be a contradiction of that intent.” (Individual, Comment #9-6)

“Are the proposed utility improvements based on widening roads such as South Side Drive merely being done to accommodate a future for Yosemite Valley which includes a lot more diesel buses rather than the possibility of electrified public transit? Based on the scant information provided in the Utilities EA, it does not appear to provide sufficient justification to spend \$75.8 million to construct the proposed utility improvements for the Valley's future. Forms of electrified public transit such as light rail would occupy only half the right of way of existing Valley roads, for instance.” (Individual, Comment #9-4)

Response: The East Yosemite Valley Utilities Improvement Plan does not propose to widen roads in Yosemite Valley. Roads will be replaced in their existing location and width after utilities are installed below them. This is clarified in the Errata Sheet and the FONSI.

57. Public Concern: The EA should clearly identify the project's effect on road widths in the Valley.

“4. It appears that you may be widening some roads to accommodate this proposed system. You show on you plans that the roads are all the same width. However my general knowledge of the valley is that the roads are not all the same width, and you will in fact be widening some roadways. You will be doing this at the expense of some flora. ...” (Individual, Harbor City, CA, Comment #16-4)

“... I made specific reference to the fact that the road prisms are all drawn to the dimension 26'-0" in Figures II-27 and II-28, “Proposed Utility Corridor Cross-Sections.” I asked why the roads had all been drawn to the same dimension when this was not an existing condition. I later found, upon examining the supporting documents in the Research Library, that these diagrams of the road prisms showing the approximate location of the proposed consolidated utilities underneath, were excerpted from the YVIMUP. [The] Utilities Project Manager ... said at the August 27th Open House that the Valley's roads are of varying widths and that the intent of Alternative 2 is to restore them to their present widths upon completing the utility consolidations.” (Individual, Comment #19-14)

“... One cannot understand the scope and dimension of the proposed Alternative 2 without knowing anything about the existing utilities and the roads under which the new utilities are to be relocated. “Was road widening to be part of the project?”, I then asked. [Park staff] responded that the information in the Utilities EA describing the dimensions of the road prisms was incorrect. It was apparent at the July 30th Open House that the public would have had to assume that widening the roads might indeed be part of the scope of Alternative 2 because no other written information was provided upon which to base assumptions about what the proposal included with respect to the dimensions of the roads upon completion of the utilities consolidation. (Individual, Comment #19-7)

Response: This project does not propose to widen roads in Yosemite Valley. Roads will be replaced in their existing location and width after utilities are installed below them. This is clarified in the Errata Sheet and the FONSI.

- 58. Public Concern: The FONSI should clearly identify that trenching along roads will be confined to the existing paved area and that new pavement will not extend beyond the area covered by existing pavement.**

“The matter of road width is critical. Prior to the Open House, executive staff of the Park stated that all trenching along road rights of way would be confined to the existing paved area, and new pavement would not extend beyond the area covered by existing pavement. This needs to be put down in writing, as it is one of the major concerns we have encountered, and the EA is misleading.”
(Conservation Organization, Comment #15-5)

Response: This project does not propose to widen roads in Yosemite Valley. Roads will be replaced in their existing location and width after utilities are installed below them. This is clarified in the Errata sheet and the FONSI.

PARK OPERATIONS

- 33. Public Concern: The East Yosemite Valley Utilities Improvement Plan Environmental Assessment should have defined the actual infrastructure needs of Yosemite Valley.**

“...[T]he existence of a Yosemite Valley Plan (YVP) calling for greater infrastructure generally, does not obviate the need for any plan claiming to tier from it to not specify what the utility needs actually are. We do not condone the creation of underlying infrastructure to support an undisclosed new generation of impacts outlined but never analyzed in the Yosemite Valley Plan.”
(Conservation Organization, Comment #12-7)

Response: The East Yosemite Valley Utilities Improvement Plan is intended to ensure adequate utilities for east Valley facilities identified in the *Yosemite Valley Plan*. Utility capacities have been based on facilities specified in the *Yosemite Valley Plan*, which calls for a reduction in visitor and employee accommodations in the Valley. The utility improvements and upgrades were designed for an expected daily use of 18,241 visitors, including overnight and day use visitors. This is consistent with the level of Valley visitor use identified in the 1980 General Management Plan.

The East Yosemite Valley Utilities Improvement Plan evaluates utility needs based on an assessment of existing utility usage, existing utility deficiencies, and projected demands associated with facilities proposed in the *Yosemite Valley Plan*. The improvements are not designed to increase the number of visitors, but to improve utility systems to meet current engineering standards for safety and reliability, and to relocate utilities from environmentally sensitive areas into roadways and other developed areas.

The existing Valley wastewater collection and transmission system has significant capacity and condition problems at current facility levels. The park is required to address these deficiencies

under the Cleanup and Abatement Order issued by the California Regional Water Quality Control Board. The overall capacity of the Valley wastewater system is limited by the permitted capacity of the El Portal Wastewater Treatment Plant (1 mgd), the Yosemite Creek Lift Station forcemain, and the interceptor line that transports wastewater from the Valley to the treatment plant. The capacities of these facilities will remain unchanged. The planning capacity for the collection and transmission system within the Valley was based on existing flows by wastewater basin and projected changes in flows by wastewater basin associated with changes identified in the *Yosemite Valley Plan*.

60. Public Concern: Yosemite National Park should not provide cable lines to accommodate NPS or concessionaire administration in Yosemite Valley.

“We do not agree with increased infrastructure in Yosemite Valley. This plan appears to accommodate trenches for new cable... If cable lines are being constructed to accommodate NPS or concessionaire administration in Yosemite Valley, that is also inappropriate. NPS administration and offices are supposed to be moved to El Portal. The concessionaire offices are supposed to be moved to the Central Valley.” (Conservation Organization, Comment #12-12)

Response: The East Yosemite Valley Utilities Improvement Plan is intended to ensure adequate utilities for east Valley facilities identified in the *Yosemite Valley Plan*, which calls for a reduction in park administration facilities in the Valley. The communications improvements included in the Utilities Improvement Plan are designed to provide up to date voice and data communications capabilities for existing and proposed facilities. Utilities and other park maintenance functions increasingly rely on real-time data for monitoring the systems and identifying any problems as they occur. Improvements in communications capabilities are intended to improve the efficiency, safety, and reliability of Valley utilities and other park operations.

The appropriate level of development in the Valley was decided by the approved *Yosemite Valley Plan* after considerable public involvement and management deliberation. Reanalysis of these development levels is beyond the scope of this document.

62. Public Concern: Yosemite National Park should concentrate on necessary and appropriate management, maintenance, and repair of the existing wastewater system in Yosemite Valley.

“The Friends of Yosemite Valley has been asking for necessary and appropriate maintenance in Yosemite Valley, especially repair, maintenance, and monitoring of the sewage systems.” (Conservation Organization, Comment #12-1)

“If a spill occurs, it will not be a disastrous raw sewage spill as occurred during the NPS test of the sewer line in July of 2000 in which 200,000 gallons of raw sewage spilled into the Merced River. This spill continued for hours because, according to a Central Valley Regional Water Quality Control Board report, NPS decision makers decided to not post an employee at the manhole near the El Portal Waste Water Treatment Plant (WWTP). In addition, if there had been an employee on duty throughout the night at the Plant, they would have been able to stop the spill.” (Conservation Organization, Comment #12-9)

“Instead of spending millions of dollars on new development, it appears important to post employees at the WWTP on 24 hours shifts and take care of the existing infrastructure.” (Conservation Organization, Comment #12-10)

Response: Repair and maintenance of the existing system was evaluated in Alternative 1, the No Action Alternative. This alternative was sufficiently evaluated in the environmental assessment. This alternative does not meet the purpose and need for the project. It does not remove utilities from the areas identified for ecological restoration or provide efficient utility service to areas proposed for development or redevelopment in the *Yosemite Valley Plan*.

63. Public Comment: The EA should address whether the project will increase electromagnetic emission in the east Valley.

“We see nowhere in this EA a discussion of the impacts of increasing electromagnetic emissions in the East Valley through this plan.” (Conservation Organization, Comment #12-15)

Response: The East Yosemite Valley Utilities Improvement Plan will not substantially change the public’s exposure to electromagnetic fields in the Valley. This project is designed to ensure efficient service to existing facilities and those proposed in the *Yosemite Valley Plan*, and to allow for the relocation of major electrical lines into consolidated corridors. This project is not designed to accommodate increased visitor or employee use of the Valley river corridor. The electrical distribution system will use shielded cables and be buried underground, which reduces electrical fields as compared to overhead lines. This project also includes removal of four above ground electrical transformers and construction of six below ground electrical transformers that will be installed with metallic covers. One new above ground pad mounted transformer will be located in the Curry Village employee housing area. The change in transformers is not expected to substantially change the public's exposure to electromagnetic fields in the Valley, particularly due to the limited extent of the magnetic field and the amount of time that any one person would be close to these facilities.

East Yosemite Valley Utilities Improvement Plan
Environmental Assessment

Yosemite National Park

Lead Agency: National Park Service

Merced Wild and Scenic River Section 7 Determination

INTRODUCTION

Purpose, Authority, and Designation

The purpose of this determination is to evaluate whether the impact of the proposed East Yosemite Valley Utilities Improvement Plan would directly and adversely affect the free- flowing condition and Outstandingly Remarkable Values for the affected segments of the Merced River.

The authority for this determination was enacted under Section 7(a) of the Wild and Scenic Rivers Act (Public Law (PL) 90- 542, as amended, 16 United States Code (USC) 1271- 1278). Section 7(a) states, in part:

“no department or agency of the United States shall assist by loan, grant, license or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river was established, as determined by the Secretary charged with its administration.”

The Wild and Scenic Rivers Act does not prohibit development along a river corridor; however, the act does specify guidelines for the determination of appropriate actions within the bed and banks of a Wild and Scenic River.² As the designated manager for the Merced River segments within the boundaries of Yosemite National Park and the El Portal Administrative Site, the National Park Service must prepare a Section 7 determination on all proposed water resources projects (includes bridges and other roadway construction/reconstruction projects³) to ensure they do not directly and adversely impact the free- flowing condition or the values for which the river was designated.⁴

² Wild and Scenic Rivers Guidelines. *Federal Register*, 47 (173). 1982. National Park Service (NPS) and Office of the Secretary, Interior; Forest Service (USFS) and Office of the Secretary, U.S. Department of Agriculture (USDA).

³ A water resources project is any dam, water conduit, reservoir, powerhouse, transmission line, or other works project under the Federal Power Act, or other developments that would affect the free-flowing characteristics of a wild and scenic or congressionally authorized study river. In addition to projects licensed by the Federal Energy Regulatory Commission, water resource projects may also include: dams, water diversions, fisheries habitat and watershed restoration, bridges and other roadway construction/reconstruction projects, bank stabilization projects, channelization projects, levee construction, boat ramps, fishing piers, and activities that require a Section 404 permit from the U.S. Army Corps of Engineers (IWSRCC 1999).

⁴ This description of the Wild and Scenic Rivers Act Section 7 determination process is adapted from a technical report by the interagency Wild and Scenic Rivers Coordinating Council (IWSRCC [Joint document produced by Bureau of Land Management, National Park Service, U.S. Fish and Wildlife Service and U.S. Forest Service] Wild and Scenic Rivers Reference Guide. 1999).

WILD AND SCENIC RIVER DESIGNATION

During 1987, Congress designated the Merced River a Wild and Scenic River to protect its free-flowing condition and to protect and enhance its unique values for the benefit and enjoyment of present and future generations (16 USC 1271). This designation provides special protection for the Merced River and designated tributaries under the Wild and Scenic Rivers Act.

Passage of PL 100- 149 (1987) and PL 102- 432 (1992) placed 122 miles of the main stem and South Fork Merced River into the Wild and Scenic River System. Rivers tributary to the Merced, besides the South Fork, and also included were the Red Peak, Merced Peak, Triple Peak, and Lyell. The National Park Service manages 81 miles of the river system (including the Merced River main stem and the South Fork within Yosemite National Park and the El Portal Administrative Site), while the remaining 41 designated river miles are managed by the U.S. Forest Service and the U.S. Bureau of Land Management.

EAST YOSEMITE VALLEY UTILITIES IMPROVEMENT PLAN WILD AND SCENIC RIVERS ACT SECTION 7 DETERMINATION

The Section 7 evaluation for the East Yosemite Valley Utilities Improvement Plan has been summarized in table 3- 1. This evaluation was based on guidance provided within the Wild and Scenic Rivers Act: Section 7 Technical Report (Interagency Wild and Scenic Rivers Coordinating Council), Appendix C, Evaluation Procedure under the heading Direct and Adverse. The direct and adverse evaluation procedure is carried out for water resources projects licensed by the Federal Energy Regulatory Commission or other federally assisted water resources projects within the bed or banks of the designated river. The East Yosemite Valley Utilities Improvement Plan includes construction activities within the bed and banks of the Merced River; as well as removal of utility infrastructure from the river and adjacent areas. The Section 7 determination process presented herein applies only to the Preferred Alternative. The Preferred Alternative as discussed in this document, is the Selected Alternative.

OUTSTANDINGLY REMARKABLE VALUES

Outstandingly Remarkable Values are the river- related values that make the river segment unique and worthy of special protection. They form the basis for the river's designation as a Wild and Scenic River. Outstandingly Remarkable Values for the Main Stem – Valley segment include:

- Scientific – The entire river corridor constitutes a highly significant scientific resource because the river watershed is largely within designated Wilderness in Yosemite National Park. Scientific Outstandingly Remarkable Values relate to the Merced River values for research. This Outstandingly Remarkable Value applies to all the Merced River segments.
- Scenic – The Valley segment provides magnificent views from the river and its banks of waterfalls (Nevada, Vernal, Illilouette, Yosemite, Sentinel, Ribbon, Bridalveil, and Silver Strand), rock cliffs (Half Dome, North Dome/Washington Column, Glacier Point, Yosemite Point/Lost Arrow Spire, Sentinel Rock, Three Brothers, Cathedral Rock, and El Capitan), and meadows (Stoneman, Ahwahnee, Cook's, Sentinel, Leidig, El Capitan, and Bridalveil). There is a scenic interface of river, rock, meadow, and forest throughout the segment.
- Recreation – This segment offers opportunities to experience a spectrum of river- related recreational activities, from nature study and sightseeing to hiking. Yosemite Valley is one of the premier outdoor recreation areas in the world.

Table 3-1
Section 7 Evaluation for East Yosemite Valley Utilities Improvement Plan

Evaluation Criteria	Project Data
Define The Proposed Activity	
Project proponent	National Park Service, Yosemite National Park
Purpose and need for the project	The purpose of the East Yosemite Valley Utilities Improvement Plan is to develop integrated utility corridors located in environmentally preferable areas, and to reduce utility infrastructure located in environmentally sensitive areas. The proposed project would reduce utility infrastructure within the River Protection Overlay and within adjacent areas proposed for ecological restoration.
Geographic location of the project	The East Yosemite Valley Utilities Improvement Plan will include improvements located primarily within the eastern portion of Yosemite Valley, from the water storage facility south of Happy Isles to the Yosemite Lodge area.
Project description	<p>The Selected Alternative includes construction of integrated utility corridors located in existing utility corridors and along existing or proposed transportation corridors; a reduction in the number of Merced River and major tributary utility crossings; a reduction in the amount of utility infrastructure located within the River Protection Overlay; and removal or abandonment of utility infrastructure located within riparian areas proposed for ecological restoration.</p> <p>Refer to the description of the Selected Alternative (Alternative 2) in the <i>East Yosemite Valley Utilities Improvement Plan Environmental Assessment</i>, Chapter II.</p>
Duration of the proposed activities	Implementation of the East Yosemite Valley Utilities Improvement Plan would occur in phases over the next 10 years. Phase 1 would begin in the fall of 2003 and would include construction of the proposed Merced River crossing. In-channel work, bank stabilization, and revegetation would be completed within a two- to three-month period during the fall of 2003 (September through November) when the flow of the Merced River is typically lowest (less than 200 cubic feet per second). Phase 2 of the East Yosemite Valley Utilities Improvement Plan is expected to begin in January 2004 and would be coordinated with reconstruction activities proposed for the east Valley campgrounds. Later phases of the proposed project would occur as redevelopment occurs in other areas. For example, removal of river crossings and utility infrastructure in meadow areas identified for restoration would be coordinated with ecological restoration activities in these areas.
Magnitude and/or extent of the proposed activities	The East Yosemite Valley Utilities Improvement Plan proposes development of integrated utility corridors and relocation of utility infrastructure out of environmentally sensitive areas and into environmentally preferable areas. The East Yosemite Valley Utilities Improvement Plan proposes one new Merced River utility corridor crossing and alteration of two additional Merced River utility crossings. It also proposes removal of several existing Merced River crossings and major tributary crossings. Refer to the <i>East Yosemite Valley Utilities Improvement Plan Environmental Assessment</i> , Chapter IV, Environmental Consequences, for detailed data concerning potential impacts of the proposed action.
Mitigation	The East Yosemite Valley Utilities Improvement Plan is designed to locate utility infrastructure in environmentally preferable areas, reducing utility crossings of the Merced River and major tributaries, as well as removing or abandoning utility infrastructure in areas identified for ecological restoration in the <i>Yosemite Valley Plan</i> . Mitigation (e.g., Best Management Practices and resource-specific measures) is incorporated into the Selected Alternative. Refer to the <i>East Yosemite Valley Utilities Improvement Plan Environmental Assessment</i> , Chapter II, Alternatives, for mitigation measures incorporated into the Selected Alternative.

Table 3-1 (Continued)
Section 7 Evaluation for East Yosemite Valley Utilities Improvement Plan

Evaluation Criteria	Project Data
Define The Proposed Activity	
Relationship to past and future management activities	The <i>Yosemite Valley Plan</i> calls for utility relocation to reduce impacts to environmentally sensitive areas and to provide efficient utility service to areas identified for redevelopment. The East Yosemite Valley Utilities Improvement Plan is consistent with the <i>Yosemite Valley Plan</i> . The Selected Alternative is also consistent with the Wild and Scenic River guidance provided in the <i>Merced River Plan</i> . Implementation of the Selected Alternative and associated actions under the <i>Yosemite Valley Plan</i> would enhance the free flow of the river and riparian and floodplain extent, functions, and values. The Selected Alternative would have a beneficial effect on the biological and hydrologic processes of the river.
Describe Whether The Proposed Activity Will Directly Alter Within-Channel Conditions	
The position of the proposed activity relative to the streambed and streambanks	The East Yosemite Valley Utilities Improvement Plan implementation activities would occur throughout the east Valley. Both construction and removal of utility infrastructure will occur within the River Protection Overlay and within the bed and banks of the Merced River as well.
Any likely resulting changes in:	
Active channel location	The East Yosemite Valley Utilities Improvement Plan will eliminate several existing utility lines that are buried beneath the Merced River riverbed. Three of these utility crossings are currently exposed and affect the natural flow of the Merced River. In addition, the Selected Alternative will install one new consolidated Merced River utility crossing and replace two existing crossings. These crossings will be designed to minimize potential impacts to the river's free flow and are not expected to adversely impact existing channel locations. The utility crossings will be placed approximately 8 feet below the riverbed, and the riverbed will be returned to the pre-existing contour.
Channel geometry (cross-sectional shape, width, depth characteristics)	The East Yosemite Valley Utilities Improvement Plan will eliminate several existing utility lines that are buried beneath the Merced River riverbed. Three of these utility crossings are currently exposed and affect the natural flow of the Merced River. In addition, the Selected Alternative will install one new Merced River utility crossing and replace two existing crossings. These crossings will be designed to minimize impacts to the river's free flow. The utility crossings will be placed approximately 8 feet below the riverbed and the riverbed will be returned to the pre-existing contour. Therefore, once constructed, the Selected Alternative is not expected to create conditions that would alter existing channel geometry.
Channel slope (rate or nature of vertical drop)	As discussed above, the Selected Alternative will eliminate several existing utility lines that are buried beneath the Merced River riverbed, install one new Merced River utility crossing, and replace two other existing crossings. These new crossings will be designed to minimize impacts to the river's free flow. The utility crossings will be placed approximately 8 feet below the riverbed, and the riverbed will be returned to the pre-existing contour. Therefore, once constructed, the Selected Alternative is not expected to create conditions that would have an adverse impact to or impede the river's natural channel slope.
Channel form (straight, meandering, or braided)	The utility crossings will be placed approximately 8 feet below the riverbed. When construction activities have been completed, the riverbed will be returned to the pre-existing contour. Therefore, the Selected Alternative is not expected to alter the river's existing channel form.
Relevant water quality parameters (turbidity, temperature, nutrient availability)	During construction at periods of low water, turbidity impacts to the river would likely be small and would be mitigated through application of Best Management Practices. Refer to the <i>East Yosemite Valley Utilities Improvement Plan Environmental Assessment</i> , Chapter II, Alternatives, for mitigation measures incorporated into the Selected Alternative. Once construction is completed, the Selected Alternative would have no effect on river water quality.

Table 3-1 (Continued)
Section 7 Evaluation for East Yosemite Valley Utilities Improvement Plan

Evaluation Criteria	Project Data
Describe Whether The Proposed Activity Will Directly Alter Within-Channel Conditions	
Navigation of the river	River navigation as defined by the U.S. Army Corps of Engineers is not applicable to this section of the river. Only 20 miles of the Merced River, from its confluence with the San Joaquin River, is designated as navigable by the U.S. Army Corps of Engineers.
Describe Whether The Proposed Activity Will Directly Alter Riparian And/Or Floodplain Conditions	
The position of the proposed activity relative to the riparian area and floodplain	The East Yosemite Valley Utilities Improvement Plan proposes actions throughout the east Valley. The overall affect of the Selected Alternative is to reduce utility infrastructure within the riparian area and floodplain. Utility infrastructure may be removed or abandoned in riparian areas identified for ecological restoration.
Any likely resulting changes in:	
Vegetation composition, age structure, quantity, or vigor	Construction activities will result in short-term loss of vegetation in construction areas. The reduction of utility infrastructure in areas identified for ecological restoration should result in long-term beneficial affects on vegetation. Refer to the <i>East Yosemite Valley Utilities Improvement Plan Environmental Assessment</i> , Chapter IV, Environmental Consequences, for a detailed discussion of impacts to vegetation.
Relevant soil properties such as compaction or percent bare ground	Construction activities will result in minor short-term adverse impacts to soils in construction areas where riparian or floodplain conditions exist. The reduction of utility infrastructure in areas identified for ecological restoration should result in long-term beneficial affects on soils. Refer to the <i>East Yosemite Valley Utilities Improvement Plan Environmental Assessment</i> , Chapter IV, Environmental Consequences, for a detailed discussion of impacts to soils.
Relevant floodplain properties such as width, roughness, bank stability, or susceptibility to erosion	Implementation of the East Yosemite Valley Utilities Improvement Plan will result in a reduction of utility infrastructure within the floodplain. The reduction in utility crossings of the river would be expected to have long-term beneficial effects on bank stability and erosion in the areas where utility crossings are removed. Refer to the <i>East Yosemite Valley Utilities Improvement Plan Environmental Assessment</i> , Chapter IV, Environmental Consequences, for a detailed discussion of impacts to floodplains.
Describe Whether The Proposed Activity Will Directly Alter Upland Conditions	
The position of the proposed activity relative to the uplands	Implementation of the East Yosemite Valley Utilities Improvement Plan will include construction of integrated utility corridors in upland areas. Utility corridors have been located, where possible, in previously disturbed areas such as utility and transportation corridors. Refer to the <i>East Yosemite Valley Utilities Improvement Plan Environmental Assessment</i> , Chapter IV, Environmental Consequences, for a detailed discussion of impacts to uplands.
Any likely resulting changes in:	
Vegetation composition, age structure, quantity, or vigor	Construction activities will result in short term impacts to upland vegetation. Corridors have been located in previously disturbed areas, where possible. The Phase 1 utility corridor construction could result in minor impacts to upland vegetation in the Camp 6 area. Refer to the <i>East Yosemite Valley Utilities Improvement Plan Environmental Assessment</i> , Chapter IV, Environmental Consequences for a detailed discussion of impacts to vegetation.
Relevant soil properties such as compaction or percent bare ground	Construction activities will result in short-term impacts to soils in construction areas. The reduction of utility infrastructure in areas identified for ecological restoration should result in long term beneficial affects on soils. Refer to the <i>East Yosemite Valley Utilities Improvement Plan Environmental Assessment</i> , Chapter IV, Environmental Consequences, for a detailed discussion of impacts to soils.

Table 3-1 (Continued)
Section 7 Evaluation for East Yosemite Valley Utilities Improvement Plan

Evaluation Criteria	Project Data
Describe Whether The Proposed Activity Will Directly Alter Upland Conditions	
Relevant hydrologic properties such as drainage patterns or the character of surface and subsurface flows	Hydrologic properties would improve in areas designated for ecological restoration where utilities would be removed. In other areas, construction mitigation measures designed to protect hydrologic properties include salvage and reuse of soils excavated and recontouring of construction areas to pre-existing contours.
Potential changes in upland conditions that would influence archeological, cultural, or other identified significant resource values	Construction activities would be performed in accordance with stipulations in the parkwide 1999 Programmatic Agreement and the 1986 Memorandum of Agreement. The Selected Alternative would not influence archeological, cultural, or other identified significant resource values in uplands of the Merced River.
Evaluate And Describe Whether Changes In On-Site Conditions Can Or Will Alter Existing Hydrologic Or Biologic Processes	
The ability of the channel to change course, re-occupy former segments, or inundate its floodplain	The project would reduce utility infrastructure within the riverbed and adjacent floodplains. The Selected Alternative would not enhance or impede the ability of the river to inundate the floodplain.
Streambank erosion potential, sediment routing and deposition, or debris loading	The project would reduce utility infrastructure within the riverbed, including utility crossings that are currently exposed. The Selected Alternative would also reduce the need for access to the riverbank and riverbed areas for utility maintenance and repairs. This would be expected to reduce the potential for streambank erosion, sediment routing and deposition or debris loading over the long-term.
The amount or timing of flow in the channel	The proposed project would not affect the amount or timing of flow in the Merced River.
Existing flow patterns	Removal of exposed utility crossings in the Merced River and major tributaries will help allow the river to return to more natural flow patterns. New construction would be placed well below existing river channel depths and would not impede existing flow patterns.
Surface and subsurface flow characteristics	The proposed project is not expected to result in significant changes to surface and subsurface flow characteristics.
Flood storage (detention storage)	The Selected Alternative is not expected to have a measurable effect on river flood storage capability.
Aggregation and or degradation of the channel	The Selected Alternative is not expected to have a measurable effect on aggregation and/or degradation of the river's natural channel properties.
Biological processes such as:	
Reproduction, vigor, growth, and/or succession of streamside vegetation	Implementation of the East Yosemite Valley Utilities Improvement Plan would reduce utility infrastructure within the riverbed and adjacent riparian areas.
Nutrient cycling	The proposed project is not expected to have a measurable effect on natural nutrient cycling processes.
Fish spawning and/or rearing success	The Selected Alternative would result in a reduction of utility infrastructure within the riverbed and adjacent areas. The project would enhance the free-flowing condition of the Merced River and the biological integrity of this segment for native fish and wildlife.
Riparian-dependent avian species needs	The reduction of utility infrastructure within riparian areas would reduce future impacts to these areas and enhance riparian habitats.

Table 3-1 (Continued)
Section 7 Evaluation for East Yosemite Valley Utilities Improvement Plan

Evaluation Criteria	Project Data
Evaluate And Describe Whether Changes In On-Site Conditions Can Or Will Alter Existing Hydrologic Or Biologic Processes	
Amphibian/mollusk needs	In-channel construction activities could result in short-term impacts to amphibians or mollusks at utility crossing sites. Mitigation measures (e.g., Best Management Practices, species-specific monitoring) would reduce the identified effects to a negligible intensity. Refer to the <i>East Yosemite Valley Utilities Improvement Plan Environmental Assessment</i> , Chapter II, Alternatives, for mitigation measures incorporated into the Selected Alternative. Over the long term, the reduction of utility infrastructure within the riverbed and adjacent areas would have a beneficial impact on habitat for species of amphibians and mollusks native to the Merced River.
Species composition (diversity)	Reduction of utility infrastructure within the riverbed and adjacent areas would enhance riparian habitat and have a beneficial effect on species composition.
Estimate The Magnitude And Spatial Extent Of Potential Off-Site Changes	
Consider and document:	
Changes that influence other parts of the river system	Implementation of the East Yosemite Valley Utilities Improvement Plan will occur throughout the Valley, and will result in temporary localized construction-related affects that are not expected to adversely affect the river long-term. The removal of utilities in areas slated for ecological restoration will enhance hydrologic processes in these areas that could result in a positive influence on the river system.
The range of circumstances under which off-site changes might occur (for example, as may be related to flow frequency)	Implementation of the East Yosemite Valley Utilities Improvement Plan is not expected to create circumstances under which changes in off-site would result in impairment of natural river flow frequencies or volumes.
The likelihood that predicted changes will be realized	The changes associated with a reduction of utility crossings in the Merced River and other environmentally sensitive area would be realized upon full implementation of the project.
Specify processes involved, such as water and sediment, and the movement of nutrients	Natural fluvial processes such as free flow, sediment transport, and nutrient exchange would be enhanced upon completion of the Selected Alternative.
Define The Time Scale Over Which Steps 3-6 Are Likely To Occur	
Review steps 3-6, looking independently at the element of time. Define and document the time scale over which the effects will occur.	In-channel work, bank stabilization, and revegetation for Phase 1 of the East Yosemite Valley Utilities Improvement Plan would be completed within a 2- to 3-month period during the fall of 2003 (September through November) when the flow of the Merced River is typically lowest (less than 200 cubic feet per second). Other construction within the river is planned in Phase 2 and Phase 3 of the project. All river work will occur during low flow. The overall project duration would be up to 10 years.

- **Biological** – Riparian areas and low- elevation meadows are the most productive communities in Yosemite Valley. The high quality and large extent of riparian, wetland, and other riverine areas provide rich habitat for a diversity of river- related species, including special- status species, neotropical migrant songbirds, and numerous bat species.
- **Cultural** – The Valley segment contains evidence of thousands of years of human occupation reflected in a large number of archeological sites and continuing traditional use today. Nationally significant historic resources are found here, such as designed landscapes and developed areas, historic buildings, and circulation systems (trails, roads, and bridges) that provide visitor access to the sublime views of natural features that are culturally valuable.

- Hydrologic Processes – The Valley segment is characterized by a meandering river, world-renowned waterfalls, an active flood regime, oxbows, unique wetlands, and fluvial processes.

Effects of the Selected Alternative on Outstandingly Remarkable Values

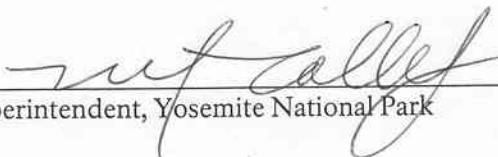
The Selected Alternative would result in development of consolidated utility corridors, a reduction in the number of Merced River utility crossings, a reduction of utility infrastructure located within environmentally sensitive areas, and construction of one new Merced River utility crossing. The proposed project has been designed to minimize impacts to the free-flowing character of the Merced River. Indirectly, relocation of the utilities and removal of utilities in the meadow areas designated for ecological restoration will result in enhancement of the river's biological and hydrologic Outstandingly Remarkable Values. Low-elevation meadows, such as those designated for ecological restoration, are one of the most productive communities in Yosemite Valley. In addition, restoration of the meadow areas will enhance the river's hydrologic values by providing areas that encourage the river's active flood regime and fluvial processes. An assessment of the Selected Alternative's effects on Outstandingly Remarkable Values is provided in table 3-2.

Section 7 Determination

The Selected Alternative would develop consolidated utility corridors within less environmentally sensitive areas, reduce the number of Merced River utility crossings, and remove or abandon utilities located in environmentally sensitive areas such as meadows identified for ecological restoration. The Selected Alternative does result in one new Merced River crossing which will be constructed eight feet under the existing riverbed. Riverbed materials will be salvaged and used to return the riverbed to its pre-construction contours. The project has been designed to minimize impacts to free-flowing condition of the river, interference with linkages to tributary inflow and backwater areas, and disruption of contribution of woody debris to the river.

The project would have an indirect beneficial effect on the biological and hydrologic Outstandingly Remarkable Values by reducing utility infrastructure within the River Protection Zone and those areas designated for ecological restoration. The ecological restoration is expected to enhance the river's biological and hydrologic values by improving riverine habitat and allowing the river's floodplain to expand into historically flooded areas. The National Park Service concludes that the Selected Alternative would enhance free-flow of the Merced River and would not have any direct and adverse effects on the Outstandingly Remarkable Values for which the river was designated Wild and Scenic.

Recommended:

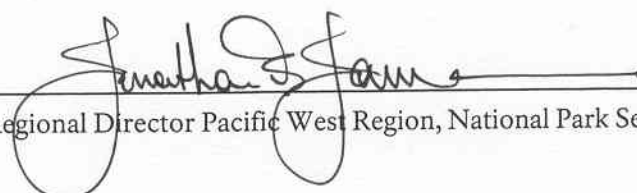


Superintendent, Yosemite National Park

10/23/03

Date

Approved:



Regional Director Pacific West Region, National Park Service

11/24/03

Date

Table 3-2

Effects of the Selected Alternative on Outstandingly Remarkable Values in the Valley Segment of the Merced Wild and Scenic River Corridor**Outstandingly Remarkable Value****Effects of the Selected Alternative**

Scientific – The entire river corridor constitutes a highly significant scientific resource because the river watershed is largely within designated Wilderness in Yosemite National Park. Scientific Outstandingly Remarkable Values relate to the Merced River's value for research. This Outstandingly Remarkable Value applies to all the Merced River segments.

The Selected Alternative would have no effect on scientific resources of the river. The number of Merced River utility crossings would be reduced and remaining crossings would be placed far enough under the surface to leave flow unimpeded. Therefore, scientific values of the river would continue to be protected and enhanced.

Scenic – The Valley segment provides magnificent views from the river and its banks of waterfalls (Nevada, Vernal, Illilouette, Yosemite, Sentinel, Ribbon, Bridalveil, and Silver Strand), rock cliffs (Half Dome, North Dome/Washington Column, Glacier Point, Yosemite Point/Lost Arrow Spire, Sentinel Rock, Three Brothers, Cathedral Rock, and El Capitan), and meadows (Stoneman, Ahwahnee, Cook's, Sentinel, Leidig, El Capitan, and Bridalveil). There is a scenic interface of river, rock, meadow, and forest throughout the segment.

The Selected Alternative would result in a reduction in the number of Merced River utility crossings. The Selected Alternative would remove or replace utility river crossings that are currently exposed in the Merced River. The proposed new crossing would be placed 8 feet under the riverbed. Although there may be short-term scenic impacts during construction, the Selected Alternative would result in reducing future scenic impacts related to maintenance and repair work on the 13 existing crossings. Therefore, the Selected Alternative would enhance the scenic Outstandingly Remarkable Value on a segment-wide basis.

Geologic Processes/Conditions – The Valley segment contains a classic, glaciated, U-shaped valley, providing important examples of a mature meandering river; hanging valleys such as Yosemite and Bridalveil Creeks; and evidence of glaciation (e.g., moraines below El Capitan and Bridalveil Meadows).

The Selected Alternative would have no effect on the geologic process Outstandingly Remarkable Value. The Selected Alternative would result in a reduction in the number of Merced River utility crossings. The Selected Alternative would remove or replace utility river crossings that are currently exposed in the Merced River and the proposed new crossing would be placed 8 feet under the riverbed. The Selected Alternative would not affect the meandering of the river, the hanging valleys, or the evidence of glaciation. These values would continue to be protected and enhanced.

Recreation – The Valley segment offers opportunities to experience a spectrum of river-related recreational activities, from nature study and sightseeing to hiking. Yosemite Valley is one of the premier outdoor recreation areas in the world.

The Selected Alternative would result in a reduction in the number of Merced River utility crossings. The Selected Alternative would remove or replace utility river crossings that are currently exposed in the Merced River. The Selected Alternative would remove or replace utility river crossings that are currently exposed in the Merced River and the proposed new crossing would be placed 8 feet under the riverbed with the riverbed then returned to its pre-construction elevation and contours. Reduction of the number of utility river crossings will reduce the need for future utility repairs in the riverbed and on the riverbanks. This will enhance river-related recreational opportunities and have a beneficial effect on the recreation Outstandingly Remarkable Value for the Valley segment.

Biological – Riparian areas and low-elevation meadows are the most productive communities in Yosemite Valley. The high quality and large extent of riparian, wetland, and other riverine areas provide rich habitat for a diversity of river-related species, including special-status species, neotropical migrant songbirds, and numerous bat species.

The Selected Alternative would have short-term, adverse, effects to riparian and aquatic habitat in the Valley segment related to construction of the proposed new utility river crossing, replacement of two other utility river crossings, and removal of several utility river crossings. Implementation of Best Management Practices and site restoration would result in minor effects. Refer to the *East Yosemite Valley Utilities Improvement Plan Environmental Assessment*, Chapter II, Alternatives, for mitigation measures incorporated into the Selected Alternative. Removal of existing utility infrastructure within the areas designated for ecological restoration is expected to enhance the mixture of riparian and wetland habitats in the east Valley segment of the river. This would have a beneficial effect on the biological Outstandingly Remarkable Value for the Valley segment of the river.

Table 3-2 (Continued)
Effects of the Selected Alternative on Outstandingly Remarkable Values in the Valley Segment of the Merced Wild and Scenic River Corridor

Outstandingly Remarkable Value

Effects of the Selected Alternative

Cultural – The Valley segment contains evidence of thousands of years of human occupation reflected in a large number of archeological sites and continuing traditional use today. Nationally significant historic resources are found here, such as designed landscapes and developed areas, historic buildings, and circulation systems (trails, roads, and bridges) that provide visitor access to the sublime views of natural features that are culturally valuable.

The Selected Alternative would result in a reduction of utility infrastructure within environmentally areas and collocation of utilities into developed corridors sited to minimize environmental impacts. Due to the extent of cultural resources in the Valley, some utility construction and removals will occur in areas with potential for cultural resources. Impacts to archeological resources{ XE "Archeological Resources" } will be mitigated through data recovery excavations, construction monitoring, and other implementation of other mitigation measures developed in consultation with culturally affiliated American Indians as specified in the 1999 Programmatic Agreement. Refer to the *East Yosemite Valley Utilities Improvement Plan Environmental Assessment*, Chapter II, Alternatives, for mitigation measures incorporated into the Selected Alternative to address the potential for impacts to cultural resources. Through compliance with the stipulations in the 1999 Programmatic Agreement, adverse effects to the cultural Outstandingly Remarkable Value for the Valley segment will be mitigated.

Hydrologic Processes – The Valley segment is characterized by a meandering river, world-renowned waterfalls, an active flood regime, oxbows, unique wetlands, and fluvial processes.

The Selected Alternative will reduce the total number of utility river crossings. Existing utility river crossings that are exposed in the river would be removed or reburied beneath the riverbed. One new utility river crossing would be constructed and placed 8 feet under the riverbed. Utility line construction and removal could have short-term impacts on water quality in the river. These impacts will be minimized through timing construction in the riverbed and banks to take place during seasonal low water and by implementing Best Management Practices for erosion control and sedimentation. Refer to the *East Yosemite Valley Utilities Improvement Plan Environmental Assessment*, Chapter II, Alternatives, for mitigation measures incorporated into the Selected Alternative. The reduction in the number of utility river crossings will reduce future riverbed and bank impacts associated with ongoing maintenance and repairs. Reduction of the utility crossings in the Merced River and removal or reconstruction of those utilities that are currently exposed in the river will enhance the free-flowing condition of the Merced River, enhancing its natural hydrologic regime. The reduction of utility infrastructure in the areas identified for ecological restoration and within the river's floodplain will enhance the active flood regime, wetlands, and fluvial processes. The Selected Alternative would enhance the hydrologic Outstandingly Remarkable Value for the Valley segment.

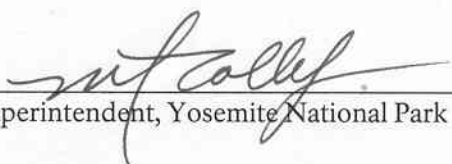
East Yosemite Valley Utilities Improvement Plan

Yosemite National Park

Lead Agency: National Park Service

Wetland Statement of Findings

Recommended:



Superintendent, Yosemite National Park

10/6/03

Date

Certification of Technical Adequacy and Servicewide Consistency:

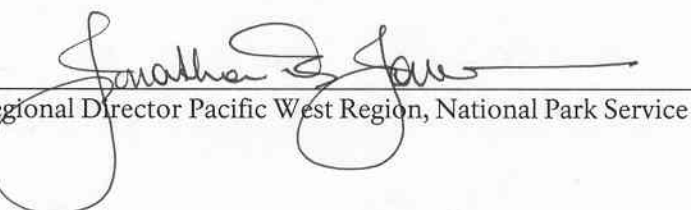


Acting Chief Water Resources Division

10/15/03

Date

Approved:



Regional Director Pacific West Region, National Park Service

11/24/03

Date

PURPOSE OF THIS STATEMENT OF FINDINGS

The purpose of this Wetland Statement of Findings is to review the East Yosemite Valley Utilities Improvement Plan in sufficient detail to:

- Avoid, to the extent possible, the short- and long- term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative
- Describe the effects on wetland values associated with the Selected Alternative
- Provide a thorough description and evaluation of mitigation measures developed to achieve compliance with Executive Order 11990 (Protection of Wetlands) and National Park Service Director's Order 77-1 and Procedural Manual 77-1: Wetland Protection
- Ensure "no net loss" of wetland functions or values

AFFECTED WETLANDS

Wetland Extent

Wetlands⁵ and deepwater habitats within the project area include the riverine habitat of the Merced River and numerous areas of palustrine forest, palustrine scrub shrub, and palustrine emergent within the Merced River corridor. A total of approximately twenty- six acres of riverine and palustrine wetland habitat occur within the project area. Wetland and aquatic habitats that may be affected are predominately associated with the Merced River corridor and several creeks that cross through the area.

Wetland Characteristics

Specific wetland classes identified within the project area are limited to riverine (rivers, creeks, and streams) and palustrine (shallow ponds, marshes, swamps, and sloughs). Using the Cowardin classification, specific wetland and deepwater classes within the project area include:

- Palustrine emergent – 18.86 acres of herbaceous (e.g., sedge, rush, grass, etc.) habitat within the Merced River corridor subject to various runoff and flooding regimes
- Palustrine forest – 1.84 acres of riparian forest habitat within the Merced River corridor subject to various runoff and flooding regimes
- Palustrine scrub shrub – 0.40 acres of riparian scrub (e.g., willow) habitat within the Merced River corridor subject to various runoff and flooding regimes
- Riverine habitats – 4.90 acres of active channels of the Merced River, its tributaries, and other intermittent streams in the project area

The size, connectivity, and integrity of wetlands in the project area, particularly palustrine forest, palustrine scrub shrub, and riverine habitat, have been directly compromised by development and visitor activities. A description of the specific wetland and deepwater classes within the project area follows.

⁵ Consistent with NPS Procedural Manual 77-1: Wetland Protection, wetlands herein are described using the Cowardin classification system.

Emergent wetlands are the most extensive Cowardin class in the project vicinity. They occupy large expanses of land comprising four different meadow communities: *Carex senta* wet meadow, grass/sedge meadow, mixed meadow, and Indian hemp meadow. These wetlands are characterized by a relatively dense layer of herbaceous vegetation that tends to be dominated either by obligate sedges or by a mixture of hydrophytic grasses, sedges, and forbs. The *Carex senta* wet meadow and grass/sedge meadow communities are the most common, occupying extensive areas on low, intermediate, and high stream terraces throughout the project vicinity. *Carex senta* wet meadow contains mostly pure stands of rough sedge and creeping wild-rye with woolly sedge and cow parsnip as associates. Grass/sedge meadow emergent wetlands typically have a continuous coverage of slender-beak sedge and grasses such as black bentgrass and creeping wild-rye, with blue wild-rye occurring at high points. Indian hemp communities are associated with low and intermediate terraces adjacent to intermittent streambeds. Indian hemp meadows contain almost pure stands of Indian hemp, with slender-beak sedge, black bentgrass, and grass-leaved goldenrod as associate species. The mixed meadow is the least extensive meadow community in the project vicinity, typically found on high stream terraces, between roads, and adjacent to lower lying meadow communities. Mixed meadows tend to be dominated by nonnative species such as black bentgrass and field mint with natives including cow parsnip and *Carex senta* occurring as associates. The emergent wetlands in the project vicinity generally appear to be primarily groundwater-driven systems; some areas, particularly those that exist within swales and topographic depressions and those adjacent to the Merced River probably also receive substantial surface water inputs.

Two forested wetland/riparian communities were found in the project area: oxbow and cutoff channel riparian forest and white alder riparian forest. Both forested wetland communities are characterized by an overstory of hydrophytic trees such as white alder and black cottonwood, and may or may not have an understory of hydrophytic grasses, forbs, sedges, and various shrubs. The oxbow and cutoff channel riparian forest community occurs in and adjacent to the oxbow channel located west of Camp 6 and east of Sentinel Drive and is the most extensive forested wetland community in the project vicinity. The oxbow and cutoff channel riparian community is dominated by white alder, a shrub understory of western azalea and Himalayan blackberry, and an herbaceous understory of rough sedge, small-fruited bulrush, creeping wild-rye, common horsetail, and field mint. The white alder riparian forest community is less extensive and occurs on low and intermediate floodplains and banks adjacent to the Merced River. The white alder riparian forest community along the Merced River is dominated by white alder with black cottonwood as an associate. Most white alder riparian forest communities in the project area contain sparse understories with shrub layers of shining willow and incense cedar saplings and herbaceous layers containing soft rush, sedges, and creeping wild-rye. All forested wetlands in the project vicinity occur in and adjacent to the oxbow located west of Camp 6 and on the banks and low floodplains of the Merced River and Yosemite Creek. Accordingly, all the forested wetlands in the project vicinity are subject to flooding and/or shallow groundwater conditions during the wet season. Because they occupy low-lying landscape positions, they probably also receive substantial surface runoff and subsurface interflow from the surrounding landscape.

The project vicinity contains only one small scrub-shrub wetland, located in a shallow topographic depression near Housekeeping Camp. The blackberry scrub-shrub wetland is dominated by Himalayan blackberry, big-leaf maple, and nimblewill, with incense cedar, black cottonwood, Douglas' wormwood, slender-beak sedge, and California laurel as associate species. The scrub-shrub wetland is bordered by mixed conifer forest and intermittent streambed habitat.

Based on topography and landscape position, it is reasonable to assume that hydrologic inputs to the scrub- shrub wetland include both shallow groundwater and surface runoff.

The three classes of riverine habitat that occur in the project vicinity are Upper Perennial Unconsolidated Bottom, Upper Perennial Unconsolidated Shore, and Intermittent Streambed. All three classes are confined to the active channels of the Merced River, its tributaries, Yosemite Creek, and other intermittent streams in the project vicinity. Riverine Upper Perennial Unconsolidated Bottom habitats (unconsolidated bottom) are characterized by the high gradient and velocity of water in the channel. In addition, they must have at least 25% cover of particles smaller than stones; vegetative cover less than 30%; and a water regime that is permanently flooded, intermittently exposed, or semipermanently flooded. The Merced River and Yosemite Creek contain the only unconsolidated bottom habitat in the project area. Riverine Upper Perennial Unconsolidated Shore (unconsolidated shore) habitats are characterized by the high gradient and velocity of water in the channel. In addition, they must have unconsolidated substrates with less than 75% areal cover of stones, boulders, or bedrock; less than 30% areal cover of vegetation other than pioneering plants; and a water regime that is irregularly exposed, regularly flooded, irregularly flooded, temporarily flooded, intermittently flooded, saturated, or artificially flooded. Generally, these shores are exposed during low water periods. Unconsolidated shore habitat was mapped on the northern and southern banks of the Merced River near Housekeeping Camp. Riverine Intermittent Streambed (intermittent streambed) is characterized by the presence of flowing water for only part of the year; it may have pioneering annuals or perennials during periods of low flow. Water regimes are irregularly exposed, regularly flooded, irregularly flooded, seasonally flooded, temporarily flooded, or intermittently flooded. Intermittent streambed habitat in the project vicinity consists of a deep abandoned river channel located south of the Merced River; a few narrow, relatively incised stream channels that are partially contained within roadway culverts; and several very shallow, low gradient swales that appear to detain and transmit snowmelt short distances during spring and early summer.

Wetland Functions and Values

The following discussion examines the wetland functions and values of each wetland type.

Palustrine Habitats

Biotic Functions. The relatively dense layer of herbaceous vegetation in the emergent wetlands and scrub- shrub wetlands provides a variety of benefits for many wildlife species. In particular, the meadow communities provide foraging habitat for raptors and perennial range habitat for deer to bed and forage. The scrub- shrub communities provide shelter for small animals and food for a wide variety of animals; for example, willow leaves and blackberries are browse for deer. The palustrine habitats also provide habitat for pollinators and invertebrates.

Hydrologic Functions. Because of their extent, palustrine habitats in the project vicinity could play an important role in flood attenuation and sediment retention. In addition, wetlands located below roads and other developed areas may serve to retain sediment and degrade nutrients before the runoff enters downstream systems.

Cultural Values. The palustrine habitats in the project vicinity area do not contain any known archeological sites. Apparent cultural values include the significant aesthetic values that meadow wetlands provide, particularly in contrast to the steep, rocky walls of the valley. Interpretive

guides and the meadow clearings that allow majestic views of the park have brought appreciation and awareness of wetlands to the millions of park visitors that have visited the area for decades.

Research/Scientific Values. The palustrine habitats, particularly emergent wetlands, provide rich opportunities for scientific research. Climate change and Native American vegetation management practices have caused changes in plant communities in the meadows. Such changes may be reflected in the floodplain sediments through charcoal debris and the pollen record, which may be amenable to scientific study. The meadows may also provide opportunities for studies on the effectiveness of meadow restoration techniques.

Economic Values. For the reasons listed above, the palustrine habitats could provide significant economic value for flood protection, fisheries, and tourism.

Riverine Habitats

Biotic Functions. The Merced River provides a year- round water source for wildlife and habitat for fish and aquatic invertebrates. The intermittent channels provide a seasonal water source for wildlife and invertebrates. Because the unconsolidated shore habitats lack vegetation and usually lack water, they may not provide significant habitat or food sources for wildlife.

Hydrologic Functions. Hydrologic functions of the Merced River are flood attenuation, streamflow maintenance, water supply, erosion control, sediment retention, water purification, and detrital export (including large woody debris) to downstream systems. Additionally, because of the coarse texture of the sediments that make up the Merced River channel, riverine habitats along the Merced River could offer some degree of groundwater recharge function. The intermittent channels are periodic water sources and therefore provide less function; however, they nevertheless contribute to streamflow maintenance, water supply, erosion control, sediment retention, water purification, and detrital export to downstream systems.

Cultural Values. Because Native Americans are known to have focused some activities along streams, riverine habitats may provide archeological value. Perennial channels also provide an aesthetic value. Visitors to the park enjoy the Merced River and engage in activities such as swimming, boating, fishing, and photography. The seasonal water flow and seasonal lack of vegetation in the intermittent channels limit the aesthetic value of these habitats.

Research/Scientific Values. The riverine habitats may provide opportunities for research in groundwater- vegetation relationships and in the effectiveness of riparian habitat restoration techniques.

Economic Values. For the reasons listed above, the riverine habitats could provide significant economic value for flood protection, fisheries, and tourism.

Existing Structures in Wetlands

Yosemite Valley utilities are currently dispersed throughout the Valley, including extensive utility infrastructure within wetland areas. Water, wastewater and electric lines and other utility infrastructure are located throughout Cook's Meadow, Ahwahnee Meadow, Stoneman Meadow, and the former Lower and Upper River Campgrounds that are currently identified for ecological restoration.

ENVIRONMENTAL CONSEQUENCES OF THE SELECTED ALTERNATIVE ON WETLANDS

Analysis

There would be no permanent reduction in the size of wetland and aquatic habitats related to implementation of the Selected Alternative. Wetland habitats that may be temporarily affected are predominately associated with the Merced River corridor, as well as several creeks that cross through the area. Figure 4- 1 illustrates the wetland and aquatic habitats found within the project vicinity. Impacts associated with Alternative 2 are summarized in table 4- 1. The majority of the areas that would be affected are within existing corridors that have been previously disturbed and developed, with the exception of the Merced River Crossing Utility Corridor. Construction impacts to wetland and aquatic habitats would be related to heavy equipment and construction activities and could include soil disturbance and compaction, dust, vegetation removal, root damage, erosion, and introduction and spread of non- native species. The addition of silt, the resuspension of sediment, or the introduction of pollutants (e.g., fuels, lubricants) related to construction activities could degrade the quality of native wetland and aquatic habitats in the immediate vicinity of construction activities.

Construction of the integrated utility corridors and repairs to existing utilities are expected to have localized, short- term, minor, adverse impacts to approximately six acres of wetland and aquatic habitat. Construction activities may also have localized, long- term, minor, adverse impacts on palustrine forest wetland habitat if the removal of trees are necessary within these areas. These short- term and long- term impacts can be mitigated using mitigation measures described below (e.g., Best Management Practices). Refer to the *East Yosemite Valley Utilities Improvement Plan Environmental Assessment*, Chapter II, Alternatives, for mitigation measures incorporated into the Selected Alternative. The construction of and continued presence of utility infrastructure within wetland and aquatic habitats could have long- term, minor, adverse effects on the hydrologic functions of these habitats by impeding the natural subsurface water flows within wetland areas and between the river and adjacent wetlands.

Removal activities would affect approximately twenty acres of wetland and aquatic habitat. Removal activities would result in localized, short- term, minor to moderate, adverse impacts; in the long- term however, the removals would have localized, minor, beneficial effects on the hydrologic functions of these habitats associated with the removal of obstructions to normal groundwater flows. In addition, removal of the utilities in these areas will facilitate future restoration activities proposed in the *Yosemite Valley Plan*.

In the long term, consolidation of utilities within Yosemite Valley into integrated utility corridors would remove utility infrastructure from the riverbanks and wet meadow areas identified for ecological restoration, reducing existing environmental impacts and eliminating the potential for future impacts in these areas from ongoing repairs, maintenance, and upgrades. Special- status species potentially found in the project area include Wawona riffle beetle, Mariposa sideband snail, Sierra pygmy grasshopper, western pond turtle, 10 species of birds, 10 species of bats, and 14 species of plants. Refer to pages IV- 105 through IV- 109 of the *East Yosemite Valley Utilities Improvement Plan Environmental Assessment* for a detailed discussion of the environmental consequences of the proposed project with regard to specific special- status species. Consolidation of utility infrastructure in major developed corridors, removal of utilities from

Table 4-1
Wetland and Aquatic Habitats Potentially Affected by Alternative 2

Subarea	Riverine upper perennial (acres)	Palustrine forest (acres)	Palustrine scrub shrub (acres)	Palustrine emergent (acres)	Total (acres)
Happy Isles					
Repairs/Construction ^a	--	--	--	--	--
Removal/Abandonment	--	--	--	--	--
Campgrounds					
Repairs/Construction	0.64	0.04	0.07	0.25	1.00
Removal/Abandonment	1.04	0.65	0.28	0.07	2.04
Ecological Restoration Area					
Repairs/Construction	0.46	0.19	0.05	--	0.70
Removal/Abandonment	1.78	0.38	--	5.69	7.85
The Ahwahnee					
Repairs/Construction	--	--	--	1.03	1.03
Removal/Abandonment	--	--	--	7.33	7.33
Curry Village					
Repairs/Construction	--	0.03	--	0.11	0.14
Removal/Abandonment	--	0.01	--	1.07	1.08
Housekeeping Camp					
Repairs/Construction	0.19	--	--	0.01	0.20
Removal/Abandonment	--	--	--	--	--
Yosemite Village					
Repairs/Construction	--	--	--	0.99	0.99
Removal/Abandonment	--	--	--	<0.01	<0.01
Camp 6/Cook's Meadow					
Repairs/Construction	0.67	0.19	--	0.96	1.82
Removal/Abandonment	0.12	0.35	--	1.35	1.82
Total by Type					
Repairs/Construction	1.96	0.45	0.12	3.35	5.88
Removal/Abandonment	2.94	1.39	0.28	15.51	20.12

a Includes repairs to existing wastewater lines as described in Alternative 1, as well as construction of proposed consolidated utility corridors.

Note: Acreage calculations are a conservative estimate based on a 100 foot corridor within wetlands and a 150 foot corridor at river crossings. The actual construction corridor will be significantly less. This approach was taken to allow for adjustments in alignment in order to avoid wetland and aquatic habitats to the greatest extent feasible.

environmentally sensitive areas, and ecological restoration activities planned for these areas are expected to have local, long-term, minor, beneficial effects on special-status species, as well as on other wildlife. Therefore, in the long term, the biotic function of the wetland and aquatic habitats in the project area would be enhanced. With the application of mitigation measures, minor impacts on special-status species are expected during construction activities.

Impacts to the cultural and economic values of the wetland and aquatic habitats within the project area are not anticipated as a result of Alternative 2. The removal of utility infrastructure in wetland and aquatic habitats may however provide greater opportunities for studies on the effect of removal of utilities on subsurface water flows, thereby enhancing the research/scientific values of the wetland and aquatic habitats in the project area.

Under Alternative 1, the No Action Alternative, maintenance and operation of the existing utility infrastructure in Yosemite Valley would continue, potentially minimizing the benefit of ecological restoration activities if repairs needed in the future continue to have short term, localized, adverse impacts to wetland resources. Though actions proposed in Alternative 2 (preferred) would take place in wetlands, the actions would result in long-term beneficial impacts on wetlands.

Cumulative Impacts

Cumulative effects to wetland and aquatic resources are based on analysis of past, present, and reasonably foreseeable future actions in Yosemite Valley in combination with potential effects of this alternative. The projects identified below include those projects that have the potential to affect local wetland patterns.

Wetland and riparian systems of the Merced River corridor have been substantially altered by development and visitor activities. These changes have negatively influenced the size, form, and function of wetlands and the plants, wildlife, and aquatic species that inhabit them. Cumulative effects would be mixed, combining both adverse and beneficial effects. Cumulative beneficial effects on wetlands include wetland restoration, rehabilitation projects, and ecosystem management. Cumulative adverse effects would be related to increased facilities, regional growth, and visitor demand.

Reasonably foreseeable future actions within Yosemite Valley are considered to have an overall beneficial effect on wetlands. For example, the Merced Wild and Scenic River Comprehensive Management Plan protects river-related natural resources through the application of management elements, including the River Protection Overlay, management zoning, protection and enhancement of Outstandingly Remarkable Values, and implementation of a Visitor Experience Resource Protection framework.

Full implementation of the *Yosemite Valley Plan* would result in a net gain of 118 acres of wetlands in Yosemite Valley through actions such as restoration of Upper River and a portion of Lower Pines Campgrounds to natural conditions; removal of roads through Stoneman and Ahwahnee Meadows; and removal of other bridges (e.g., Sugar Pine and possibly Stoneman) affecting the natural flow of the Merced River. Alternative 1 could minimize these benefits since utilities would remain in the restoration areas and utility repairs needed in the future could continue to have short term, localized, adverse impacts to these resources. Farther downstream, removal of the Cascades Diversion Dam would also remove an unnatural constriction to the free flow of the Merced River, thereby enhancing natural river dynamics including wetlands and aquatic systems

below Yosemite Valley. Some *Yosemite Valley Plan* projects, such as construction of a replacement footbridge at the Happy Isles area, construction of a vehicle bridge across Yosemite Creek near Yosemite Lodge, and expansion of some campgrounds in Yosemite Valley, have the potential to adversely affect local wetlands. These projects would be designed to ensure the long-term protection of wetlands consistent with the Merced River Plan, the Clean Water Act, and Executive Order 11990: Protection of Wetlands.

Cumulative actions would have a long-term, moderate, beneficial cumulative effect on wetlands within Yosemite Valley due to wetland restoration efforts. The local, short-term, minor, adverse effects from construction activities and ongoing maintenance and repairs would be offset by the beneficial effects of the cumulative projects.

Conclusions

Consolidation of utility infrastructure in major developed corridors, removal of utilities from environmentally sensitive areas, and ecological restoration activities planned for these areas are expected to have local, long-term, moderate, beneficial effects on wetland resources. Past, present, and reasonably foreseeable future projects in combination with Alternative 2 would have a net long-term, moderate, beneficial effect on wetland patterns within the Merced River corridor.

ALTERNATIVES CONSIDERED

Alternatives considered in the *East Yosemite Valley Utilities Improvement Plan Environmental Assessment* (Chapter II, Alternatives) include the No Action Alternative, East Yosemite Valley Utilities Improvement Plan with Merced River Crossing at Housekeeping Camp, and East Yosemite Valley Utilities Improvement Plan with Merced River Crossing near Sentinel Bridge.

Alternative 1: No Action

Alternative 1, the No Action Alternative, maintains the existing utility infrastructure in the Yosemite Valley, including necessary repairs and maintenance of the utility systems. It provides a baseline from which to compare the action alternatives, to evaluate the magnitude of proposed changes, and to measure the environmental effects of those changes.

Under the No Action Alternative, no management action would be taken to implement an East Yosemite Valley Utilities Improvement Plan. The existing dispersed utility lines would remain in place, including those utility lines located within meadow areas identified for environmental restoration and other environmentally and culturally sensitive areas. Utility corridors would not be established to consolidate multiple utilities into corridors designed to follow existing utility or transportation corridors or proposed transportation corridors and to minimize potential impacts on environmentally sensitive areas. Efficient utility services would not be provided to new facilities proposed under the *Yosemite Valley Plan*.

The No Action Alternative would include those utility infrastructure projects currently planned for the sanitary sewer collection system and required by the California Regional Water Quality Control Board to address recent wastewater releases. These projects are required to continue the current management and operation of the existing Yosemite Valley sanitary sewer system.

Alternative 2: East Yosemite Valley Utilities Improvement Plan with a Merced River crossing near Housekeeping Camp (Preferred Alternative)

Alternative 2 implements an East Yosemite Valley Utilities Improvement Plan with a Merced River utility crossing at Housekeeping Camp. Under Alternative 2, the National Park Service would develop consolidated utility corridors following existing utility lines or existing or proposed transportation corridors. This alternative would also reduce utility infrastructure within the Merced River and its floodplain and from areas identified for ecological restoration in the *Yosemite Valley Plan*. The East Yosemite Valley Utilities Improvement Plan would also ensure efficient utility service to new facilities proposed under the *Yosemite Valley Plan*.

Alternative 2 also includes sewer projects currently planned and required by the California Regional Water Quality Control Board to address recent wastewater releases. Those projects currently planned that could be eliminated with implementation of the East Yosemite Valley Utilities Improvement Plan have been removed from the analysis.

Alternative 3: East Yosemite Valley Utilities Improvement Plan with Merced River Crossing near Sentinel Bridge

Alternative 3 implements an East Yosemite Valley Utilities Improvement Plan with a Merced River utility crossing near Sentinel Bridge. Under Alternative 3, the National Park Service would develop consolidated utility corridors following existing utility lines or existing or proposed transportation corridors. This alternative would also reduce utility infrastructure within the Merced River and its floodplain and from areas identified for ecological restoration in the *Yosemite Valley Plan*. The East Yosemite Valley Utilities Improvement Plan would also ensure efficient utility service to new facilities proposed under the *Yosemite Valley Plan*.

Alternative 3 also includes sewer projects currently planned and required by the California Regional Water Quality Control Board to address recent wastewater releases. Those projects currently planned that could be eliminated with implementation of the East Yosemite Valley Utilities Improvement Plan have been removed from the analysis.

DESIGN OR MODIFICATIONS TO MINIMIZE HARM TO WETLANDS

Best Management Practices and Resource-Specific Mitigation Measures

Best Management Practices and resource-specific mitigation measures would be implemented, as appropriate, prior to, during, and/or after removal.

Best Management Practices During Construction Activities

The National Park Service (and its contractors) shall implement the following Best Management Practices, as appropriate, prior to, during, and/or after construction activities. Specific tasks would include, but are not limited to, the following:

- Inspect the project to ensure that impacts stay within the parameters of the project and do not escalate beyond the scope of the environmental assessment, as well as to ensure that the project conforms to the U.S. Army Corps of Engineers, Central Valley Regional Water Quality

Control Board Waiver of Waste Discharge Requirements and Water Quality Certification, and other applicable permits or project conditions.

- Implement compliance monitoring to ensure the project remains within the parameters of NEPA and National Historic Preservation Act compliance documents, U.S. Army Corps of Engineers Section 404 permits, etc. Compliance monitoring would ensure adherence to mitigation measures and would include reporting protocols.
- Implement natural resource protection measures. Standard measures include construction scheduling, biological monitoring, erosion and sediment control, use of fencing or other means to protect sensitive resources adjacent to the work area, and revegetation. The measures include specific monitoring by resource specialists as well as treatment and reporting procedures.
- Confine work areas within the river channel, such as workpads to support construction equipment, to the smallest area necessary.
- Steam- clean heavy equipment prior to its entry into the park to prevent importation of non-native plant species, and repair all petroleum leaks prior to work near the Merced River. Tighten hydraulic hoses and ensure they are in good condition.
- To minimize the possibility of hazardous materials seeping into soil or water, check equipment frequently to identify and repair any leaks, as directed in the spill prevention and countermeasure plan. Standard measures include hazardous materials storage and handling procedures; spill containment, cleanup, and reporting procedures; and limitation of refueling and other hazardous activities to upland/nonsensitive sites. Provide an adequate hydrocarbon spill containment system (e.g., floatable absorption boom, absorption materials, etc.) on site, in case of unexpected spills in the project area. Ensure equipment allowed within the river channel is equipped with a hazardous spill containment kit. Ensure that personnel trained in the use of hazardous spill containment kits are on site at all times during construction activities.
- Store all construction equipment within the delineated work limits.
- Ensure an emergency notification program is in place. Standard measures include notification of utilities and emergency response units prior to construction activities. Identify locations of existing utilities prior to construction activity to prevent damage to utilities. The Underground Services Alert and National Park Service maintenance staff shall be informed 72 hours prior to any ground disturbance. Construction shall not proceed until the process of locating existing utilities is completed (wastewater, electric, and telephone lines). An emergency response plan shall be required of the contractor for measures that will be taken during all high- water events during construction activities, such as evacuation of personnel, equipment, and materials from the river, etc.
- Avoid damage to natural surroundings in and around the work limits. Provide temporary barriers to protect existing trees, plants, and root zones, if necessary, as determined by vegetation management staff. Trees and other vegetation shall not be removed, injured, or destroyed without prior written approval. Ropes, cables, or fencing shall not be fastened to trees. All existing resource protection fencing (post and rope) shall be left in place and protected from heavy equipment.
- Remove all tools, equipment, barricades, signs, surplus materials, and rubbish from the project work limits upon project completion. Repair any asphalt surfaces that are damaged due to work on the project to original condition. Remove all debris from the project site, including all visible concrete, timber, and metal pieces. Grade disturbed areas and rake them smooth to eliminate tire tracks and tripping hazards.
- Locate, contain, and stabilize excavated and stored materials within upland staging areas and prevent re- entry into wetland or aquatic habitats.

- Use silt fences, sedimentation basins, etc. in work areas to reduce erosion, surface scouring, and discharge to water bodies, as defined in the erosion control plan prepared for this project.
- Delineate wetlands and apply protection measures during construction. Wetlands shall be delineated by qualified National Park Service staff or certified wetland specialists and clearly marked prior to work. Perform activities in a cautious manner to prevent damage caused by equipment, erosion, siltation, etc.

Resource-Specific Measures

Hydrology, Floodplains, and Water Quality

- Prepare an erosion control plan specifying measures to prevent erosion/sedimentation problems during project construction. Include a map of the project site delineating where erosion control measures will be applied. Include the following minimum criteria, as listed in the Guidelines for Protection of Water Quality During Construction and Operation of Small Hydro Projects (CVRWQCB 1983):
 - Construction equipment shall not be operated in flowing water, except as may be necessary to construct crossings or barriers.
 - Where working areas are adjacent to or encroach on live streams, barriers shall be constructed that are adequate to prevent the discharge of turbid water in excess of specified limits.
 - Material from construction work shall not be deposited where it could be eroded and carried to the stream by surface runoff or high stream flows.
 - All permanent roads shall be surfaced with materials sufficient to maintain a stable road surface.
 - All disturbed soil and fill slopes shall be stabilized in an appropriate manner.
 - Surface drainage facilities shall be designed to transport runoff in a nonerosive manner.
 - Riparian vegetation shall be removed only when absolutely necessary.
 - There shall be no discharge of petroleum products, cement washings, or other construction materials.
 - Erosion control measures shall be in place prior to construction activities and in good repair by October 15 of each year.
 - Stream diversion structures shall be designed to preclude accumulation of sediment. If this is not feasible, an operation plan shall be developed to prevent adverse downstream effects from sediment discharges.
- Erosion control measures shall be inspected daily during construction activities and monthly following construction activities, and repaired as required.
- Waters shall be free of changes in turbidity that cause a nuisance or adversely affect beneficial uses. Increases in turbidity attributable to controllable water quality factors shall not exceed the following limits, as described in The Water Quality Control Plan for the Central Valley Regional Water Quality Control Board (CVRWQCB 1998). In determining compliance with the limits below, appropriate averaging periods may be applied, provided that beneficial uses will be fully protected:
 - Where natural turbidity is between 0 and 5 Nephelometric Turbidity Units (NTUs), increases shall not exceed 1 NTU.
 - Where natural turbidity is between 5 and 50 NTUs, increases shall not exceed 20%.

- Where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTUs.
- Where natural turbidity is greater than 100 NTUs, increases shall not exceed 10%.
- Implement stormwater management measures to reduce nonpoint- source pollution discharge. This could include measures such as oil/sediment containment or street sweeping.
- Remove hazardous waste materials generated during implementation of the project from the project site immediately.
- Dispose of volatile wastes and oils in approved containers for removal from the project site to avoid contamination of soils, drainages, and watercourses. Keep absorbent pads, booms, and other materials onsite during projects that use heavy equipment to contain oil, hydraulic fluid, solvents, and hazardous materials spills.
- Salvage hydric soils and use them as fill in wetland excavations to the maximum extent possible. Minimize use of fill materials with high permeability in wetland areas to prevent development of unnatural groundwater conduits.
- Incorporate trench plugs into new and abandoned utility corridors through wetland areas where required to prevent formation or continuation of groundwater conduits.

Vegetation

- Implement a noxious weed abatement program. Standard measures include, as appropriate, the following elements: ensure that vehicles and equipment arrive onsite free of mud or seed-bearing material, certify all seeds and straw material as weed- free, identify areas of noxious weeds before construction activities, treat noxious weeds or noxious weed topsoil prior to work (e.g., topsoil segregation and removal), and revegetate with appropriate native species.
- Cover exposed soil with a combination of locally acquired native duff and forest litter from adjacent riparian sites to provide immediate groundcover and facilitate natural revegetation.
- Implement the planting prescriptions prepared for this project.
- Develop and implement a monitoring plan to ensure successful revegetation, maintain plantings, and replace unsuccessful plantings.
- Use native or seed- free mulch to minimize surface erosion and introduction of non- native plants.
- Confine all construction operations to specified project work limits. Install temporary barriers to protect natural surroundings (including trees, plants, and root zones) from damage. Avoid fastening ropes, cables, or fences to trees.
- As much as possible, removed plants and materials (cuttings) shall be salvaged and stored on site for revegetation following construction activities.

Refer to the *East Yosemite Valley Utilities Improvement Plan Environmental Assessment* (Chapter II, Alternatives) for a complete list of Best Management Practices and resource- specific mitigation measures applicable to the Selected Alternative. The Selected Alternative has been designed to mitigate harmful effects to wetlands. The East Yosemite Valley Utilities Improvement Plan does not include any elements that would require preparation of a subsequent statement of findings.

Site Restoration

The last phase of the project is site restoration. Following construction activities, disturbed areas will be graded and recontoured, as necessary, to revegetate with appropriate wetland, riparian, and upland plant species. Ground surface treatment will include grading to natural contours,

topsoiling, seeding, and planting. Accepted erosion protection measures, including jute mesh and hydro mulch, may be used, if necessary, to prevent soil loss. The National Park Service will prepare a prescription for revegetating any disturbed areas, including riverbanks, to be included in the construction specifications. This prescription will comply with the Yosemite Vegetation Management Plan (NPS 1997a). Revegetation of disturbed sites will be conducted by park staff immediately following construction to reduce the potential for non- native plant invasion. All plant materials will be from genetic stock indigenous to Yosemite Valley, including trees, shrubs, and forbs obtained from the construction site by salvage methods or by propagating container plants from seed or cuttings. Following restoration efforts, the reclaimed sites will be monitored to determine if reclamation efforts are successful or if additional remedial actions are necessary. Remedial actions could include the installation of erosion control structures, reseeding, and/or replanting the area, and controlling non- native plant species.

Proposed Compensation

No off- site compensation is required. The proposed action is designed to remove utility infrastructure from the riverbanks and wet meadow areas identified for ecological restoration, reducing existing environmental impacts and eliminating the potential for future impacts in these areas from ongoing repairs, maintenance, and upgrades. The removal of utility infrastructure from wetland and aquatic habitats would have localized, minor, beneficial effects on the hydrologic functions of these habitats associated with the removal of obstructions to normal groundwater flows. In addition, removal of utilities from environmentally sensitive areas are expected to have local, long- term, minor, beneficial effects on special- status species, as well as on other wildlife, thereby enhancing the biotic function of the wetland and aquatic habitats in the project area. Impacts to the cultural and economic values of the wetland and aquatic habitats within the project area are not anticipated as a result of Alternative 2. However, the removal of utility infrastructure in wetland and aquatic habitats may provide greater opportunities for studies on the effect of removal of utilities on subsurface water flows, thereby enhancing the research/scientific values of the wetland and aquatic habitats in the project area.

Although the Selected Alternative will have short- term minor adverse impacts on 5.88 acres of wetland habitat (most of which is presently disturbed), the Selected Alternative will remove utilities from 20.12 acres of wetland habitat. Therefore, the ratio of wetland restoration (through utility removal) to wetland impact will be 3.4 to 1. Figure 4- 1 illustrates the location of utility corridor construction and utility removals in relation to wetland and aquatic habitats.

JUSTIFICATION

Nonwetland Alternatives to the Selected Alternative

East Yosemite Valley Utilities Improvement Plan actions would occur within the Merced River corridor, and within riverine, palustrine forest, palustrine scrub shrub, and palustrine emergent habitat. The purpose of the East Yosemite Valley Utilities Improvement Plan is to consolidate utility infrastructure into integrated utility corridors and comply with the California Regional Water Quality Control Board Cleanup and Abatement Order. There are no alternatives to the

Selected Alternative that could be located outside the floodplain or wetland and aquatic habitat of the Merced River corridor.

Alternative 2 was selected because it would attain the widest range of beneficial uses of the environment by reducing utility infrastructure in environmentally sensitive areas, such as river- and creekbeds, floodplains, and wet meadows. The reduced number of river and creek crossings would reduce risks to health and safety from utility failures in these areas. The proposed new utility corridors are sited to reduce undesirable and unintended consequences, namely, continued maintenance and repairs of utility facilities in environmentally sensitive areas. Alternative 1 would result in continued degradation of the environment and risk to health and safety due to the concentration of utility infrastructure in environmentally sensitive areas. Alternative 3 is similar to Alternative 2 and would result in a slightly smaller wetland impact, but would result in a longer utility corridor route that would affect more highly valued resources than Alternative 2, particularly cultural resources.

New Development

The East Yosemite Valley Utilities Improvement Plan proposes the development of integrated utility corridors primarily in developed areas. One new corridor, the Merced River Crossing Utility Corridor, is proposed to be constructed through wetland areas in the Camp 6 area. The majority of work that will occur in wetlands is the removal of utility infrastructure in areas identified for ecological restoration. This should result in a net decrease in development in wetland areas.

Existing Development

Yosemite Valley utilities are currently located throughout the Valley including through wetland areas and in areas identified for ecological restoration. The East Yosemite Valley Utilities Improvement Plan proposes removal or abandonment of utility infrastructure within areas identified for ecological restoration and in other wet meadow areas, such as Cook's Meadow. This is expected to result in a net decrease in development in wetland areas.

Redevelopment

The East Yosemite Valley Utilities Improvement Plan proposes the development of integrated utility corridors primarily in developed areas. This includes use of existing and proposed roadways and trails, as well as existing utility corridors. Existing utility corridors being redeveloped as integrated utility corridors are described in more detail in Chapter II, Alternatives.

CONCLUSION

The Selected Alternative would have a beneficial impact on the extent, function, and value of wetlands by consolidation of utility infrastructure in major developed corridors and removal of utilities from environmentally sensitive areas (including wetlands). The relocation and removal actions are expected to result in a net decrease in utility infrastructure within wetland areas. In addition, removal actions would facilitate future restoration activities proposed in the *Yosemite Valley Plan* for these areas. The National Park Service has determined that there is no practicable alternative that could be located outside the floodplain or wetland habitat. Mitigation and

compliance with regulations and policies to prevent impacts to water quality, wetland function and values, and loss of property or human life would be strictly adhered to during and after construction.

Individual permits with other federal and cooperating state and local agencies will be obtained or updated as appropriate prior to construction and removal activities. No permanent adverse impacts to wetlands would occur from implementation of the Selected Alternative. As summarized in Table 4-1, the Selected Alternative will have minor temporary adverse impacts on 5.88 acres of wetland habitat, but will improve/restore conditions on 20.12 acres of wetland habitat by removal of utilities (a 3.4 to 1 compensation ratio). Therefore, the National Park Service finds the Selected Alternative to be consistent with NPS Director's Order 77-1, including the no net loss of wetlands policy.


East Yosemite Valley Utilities Improvement Plan

Yosemite National Park

Lead Agency: National Park Service

Floodplain Statement of Findings

Recommended:

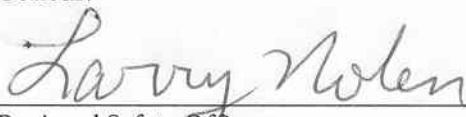


Superintendent, Yosemite National Park

10/6/03

Date

Concur:



Regional Safety Officer

10/9/03

Date

Certification of Technical Adequacy and Servicewide Consistency:



Acting Chief Water Resources Division

10/15/03

Date

Approved:



Regional Director Pacific West Region, National Park Service

11/24/2003

Date

INTRODUCTION

The National Park Service recently prepared the *Yosemite Valley Plan* to provide for managing natural and cultural resources, park facilities, and visitor experiences in the Valley. Implementation of actions presented in the *Yosemite Valley Plan* will further the park's goals of restoring, protecting, and enhancing the resources of the Yosemite Valley; providing opportunities for high-quality, resource-based visitor experiences; reducing traffic congestion; and providing effective park operations to meet the park's mission. Many of the over 250 actions will result in restoration of developed and disturbed areas to natural conditions, redevelopment of some areas, and development of other areas to accommodate visitor and employee services. During development of the *Yosemite Valley Plan*, the need to remove utility infrastructure from environmentally sensitive areas and to consolidate utilities into environmentally preferable areas was identified.

The National Park Service has prepared the East Yosemite Valley Utilities Improvement Plan to provide a roadmap for the development of consolidated utility facilities within Yosemite Valley. Implementation of the East Yosemite Valley Utilities Improvement Plan will result in a utility system that maximizes the efficiency of utility operations and maintenance and minimizes the potential for future environmental impacts. There is a need for a utility plan that will meet the following goals.

- Ensure adequate service to facilities relocated or developed under the *Yosemite Valley Plan*
- Implement upgrades needed to address previously identified utility condition and capacity issues
- Maximize use of existing transportation and utility corridors and proposed new transportation corridors
- Minimize potential future impacts to environmentally sensitive areas
- Protect and preserve the Merced Wild and Scenic River as called for in the Merced Wild and Scenic River Comprehensive Plan (Merced River Plan) (NPS 2001)

The purpose of this Floodplain Statement of Findings is to review the East Yosemite Valley Utilities Improvement Plan in sufficient detail to:

- Provide an accurate and complete description of the flood hazard assumed by implementation of the Selected Alternative (without mitigation)
- Provide an analysis of the comparative flood risk among alternative sites
- Describe the effects on floodplain values associated with the Selected Alternative
- Provide a thorough description and evaluation of mitigation measures developed to achieve compliance with Executive Order 11988 (Floodplain Management) and the NPS Floodplain Management Guideline 1993

FLOODPLAIN EXTENT

The best available data were used to determine the extent of existing floodplain boundaries and water surface characteristics of the Merced River. The Stantec (2000) and Cella Barr Associates (1998) model was used to analyze the extent of the 2-, 10-, 25-, and 100-year floodplains in the east end of Yosemite Valley between Happy Isles and the west end of Yosemite Lodge. The line

that delineates the January 1997 flood extent was used to determine the 100- year floodplain in the west end of Yosemite Valley from the west end of Yosemite Lodge to Pohono Bridge.

THE SELECTED ALTERNATIVE

The East Yosemite Valley Utilities Improvement Plan is designed to develop consolidated utility corridors, reduce utility infrastructure within the Merced River and its tributaries, reduce utility infrastructure within the Merced River floodplain, remove utility infrastructure from areas identified for ecological restoration and concentrate utility infrastructure into corridors in environmentally preferred areas. Although the proposed East Yosemite Valley Utilities Improvement Plan would reduce utility infrastructure in the floodplain, it would not remove utility infrastructure completely. Those utility corridors and associated utility infrastructure (such as sanitary sewer lift stations and electric transformers) proposed to remain or to be constructed within the floodplain would be designed to be submersible and to reduce the potential for damage from flood events.

Existing Structures in the Floodplain

The NPS Floodplain Management Guideline 1993 divides actions into the following three groups:

- Class I Actions – include administrative, residential, warehouse and maintenance buildings, and nonexempted (overnight) parking lots
- Class II Actions – those that would create “an added disastrous dimension to the flood event.” Class II actions include schools clinics, emergency services, fuel storage facilities, large sewage treatment plants, and structures such as museums that store irreplaceable records and artifacts.
- Class III Actions – Class I or Class II Actions that are located in high hazard areas such as those subject to flash flooding.

All of the actions proposed under the East Yosemite Valley Utilities Improvement Plan area considered Class I actions. The regulatory floodplain for Class I actions is the 100- year floodplain.

Proposed Actions

Under the Proposed Alternative in the East Yosemite Valley Utilities Improvement Plan, utility infrastructure within the Merced River floodplain would be reduced. Existing utility river crossings would be reduced from 13 to three consolidated crossings. Two consolidated utility river crossings would replace existing utility crossings at Clark’s Bridge and Ahwahnee Bridge. One new consolidated utility river crossing would be constructed between Housekeeping Camp and Camp 6. The proposed plan would remove all Tenaya Creek utility crossings and remove one utility crossing from Yosemite Creek.

GENERAL CHARACTERISTICS OF FLOODING IN THE AREA

Floods on the Merced River are of two general types: those that occur during the late fall and winter (November through March) primarily as the result of intense rainfall, and those that occur during the spring and early summer resulting from snowmelt. At the beginning of the wet season the ground is extremely dry, and about 3 to 5 inches of precipitation is required to satisfy the retention storage capacity of the soil before any significant runoff occurs. Later in the season, when the ground may be very wet and there may be a moderate snow cover at the higher elevations, heavy rainfall over the basin causes large flood runoff. An intense storm with a high freezing level may result in flood runoff from almost the entire basin, with as much as 2 inches of snowmelt augmenting the rainfall. Most of the runoff from the Merced River basin occurs from November through July.

Yosemite Valley has a well- developed, relatively wide floodplain that is confined by steep valley walls. The Merced River in Yosemite Valley has a relatively mild slope, with an average of 0.1%. In the middle reach of the Merced River in Yosemite Valley, downstream of Clark's Bridge to the El Capitan moraine, the river flows through a shallow channel approximately 100 to 300 feet wide. Typically, the main channel in this reach has the capacity to convey between 2- and 5- year flow events within the existing channel banks (Stantec 2000). Historic discharge in the river, measured at the Pohono Bridge gauging station, has ranged from a high of about 25,000 cubic feet per second to a low of less than 10 cubic feet per second. The mean daily discharge rate is about 600 cubic feet per second.

The low flow channel in the middle reach of Yosemite Valley meanders across a broad floodplain and through a series of bends and divides. During 25- and 100- year floods, waters substantially overflow the meandering low- flow channel path and flow straight down the Valley (Stantec 2000). Near Yosemite Lodge and downstream to the El Capitan moraine, flood waters are constricted by the moraine and tend to be deep and slow. This backwater influence, which reduces flow velocities and increases flow depths, extends about 4.5 miles upstream of the El Capitan moraine past Sentinel Bridge (Stantec 2000). Flow velocities in this backwater area for 2- and 10- year events are actually higher than for 25- and 100- year events in both channel and overbank areas due to the backwater influence (Stantec 2000).

JUSTIFICATION FOR USE OF THE FLOODPLAIN

Yosemite Valley is the most visited area in Yosemite National Park. The *Yosemite Valley Plan* provides a framework for managing natural and cultural resources, park facilities, and visitor experiences in the Valley. The utility infrastructure within Yosemite Valley must be designed to efficiently serve the areas identified for redevelopment and new development under the *Yosemite Valley Plan*, while minimizing impacts on highly valued natural and cultural resources. The East Yosemite Valley Utilities Improvement Plan provides for the development of consolidated utility corridors primarily located in environmentally preferable areas and the reduction of utility infrastructure within the floodplain and other environmentally sensitive areas. The utility facilities proposed in the East Yosemite Valley Utilities Improvement Plan are designed to be submersible and will be placed underground to minimize the potential for damage to these facilities from flood events.

DESCRIPTION OF SITE-SPECIFIC FLOOD RISK

Floods of consequence in Yosemite Valley always occur with some warning. It takes a prolonged period of intense rain for at least 24 hours to create flood conditions. Risks to humans can typically be mitigated by warning and evacuation.

In Yosemite Valley, the character of flooding varies in different locations because of local hydraulic controls. From Clark's Bridge to Housekeeping Camp in the east Valley, the Merced River floods areas outside the main river channel with shallow, swift flows that cut across meander bends. Near Yosemite Lodge and downstream to the El Capitan moraine, flood waters are constricted by the moraine and dense vegetation. Flood waters in this area are of low velocity and significant depths. At Housekeeping Camp, velocities are relatively higher with lower depths.

DESIGN OR MODIFICATIONS TO MINIMIZE HARM TO FLOODPLAIN VALUES OR RISKS TO LIFE AND PROPERTY

General Mitigation

The design of all new structures would incorporate methods for minimizing flood damage, as contained in the National Flood Insurance Program "Floodplain Management Criteria for Flood- Prone Areas" (CFR 44, 60.3) and in accordance with any local, county, or state requirements for flood- prone areas. In particular, the utility facilities proposed in the East Yosemite Valley Utilities Improvement Plan are designed to be submerged and will be placed underground to minimize the potential for flood damage.

Furthermore, the park staff would maintain an active flood evacuation plan. The plan details responsibilities of individual park employees for advanced preparedness measures; removing or securing park property; records and utility systems; monitoring communication; and conducting rescue and salvage operations.

Impacts on the Valley's natural and cultural resources will be minimized and mitigated.

CONCLUSION

The Preferred Alternative would substantially reduce potentially hazardous conditions associated with flooding by reducing the utility infrastructure within the floodplain in Yosemite Valley. In addition, the proposed utilities that would remain or be constructed within the floodplain are designed to be submersible and will be constructed underground to reduce the potential for flood damage from future flood events.

The National Park Service concludes that the Preferred Alternative would reduce the impacts of potentially hazardous conditions associated with flooding in Yosemite Valley. Mitigation and compliance with regulations and policies to prevent impacts to water quality, floodplain values, and loss of property or human life would be strictly adhered to during and after the construction. Individual permits with other federal and cooperating state and local agencies would be obtained prior to construction activities. No long- term adverse impacts would occur from the Selected Alternatives. Therefore, the National Park Service finds the Preferred Alternative to be acceptable under Executive Order 11988 for the protection of floodplains.



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www.nps.gov/yose/planning/

As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public land and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

